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Tools for Success

The Transition Costs in the Flexible Manufacturing Systems

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Abstract

Purpose – This paper expresses the point of view on the costs that appear in a flexible manufacturing system. Transition costs appear to be most significant costs and they are generated because of the transition of the system from one configuration to another.

Methodology/approach – The debated topic is approached from the viewpoint of the flexible system programmer, which must obtain the smallest production cost in the system. An optimization method for this is the Mathematical Game Theory.

Findings – Using the Mathematical Game Theory, leads to significant results that may compose the basis for scheduling flexible manufacturing systems. Values achieved by the two general game players create a balance between variety of manufactured products (diversity) and configurations of the system (cost generators).

Research limitations/implications – It's a theoretical model, but it can be applied to any type of flexible manufacturing system, as long as the variables are known.

Practical implications – The model started from a set of real products within an enterprise.

Originality/value – The originality of the work cost in the way of managing the costs in such systems, as a game between two contradictions - the consumer's desire to produce as many types of products in the same system and the limited capability of the system.

Key words: flexible manufacturing system, transition costs, Game Theory

Introduction

Production intertwines several areas that contribute to the final product. The marketing departments are studying the desires of the clients and the market changes, the planner/designer transforms the will of the customer in real products, with technical characteristics and the technological engineer tells how to produce cheap and with good quality. Everything is connected in a system that depends on some key factors: time cost, quality and flexibility. These factors appear depending on the requirements, goals and criteria. It's possible that not all factors occur simultaneously in the production process.

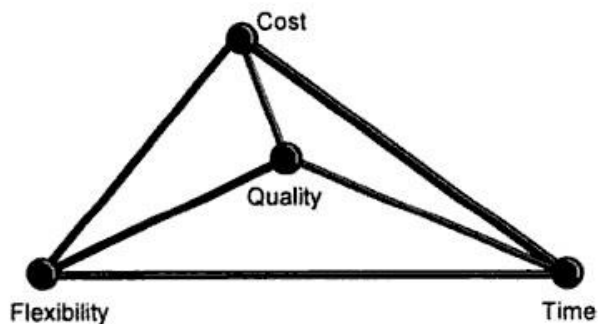


Fig. 1 – Pyramid of the production factors

Source: Chryssolouris, G. - Manufacturing systems: theory and practice, Second Edition, Mechanical Engineering Series, Springer Publishing, 2006, p.9

The Cost - a Main Factor Influencing the Production System

Used nowadays with the competitive economy market, each company is seeking to have competitive advantages, which provide quality products at low cost and prices. It is useless to talk about implementing a FMS in a case where the system does not provide economic benefits. Investments in flexible systems can sometimes rise to amounts that are not justified in the upcoming period. Implementation decision should search for a target in a distant horizon, where long-term investment will probably be recovered. Perhaps only in research is allowed to purchase flexible cells that don't justify their productive investment, but can lead to innovations that may change its utility.

As a positive argument for using this technology, are studies that prove that approximately 8-10% of the total processing time is pre-operative work of a piece, and only 30% of this time is the actually working time. A FMS is using the computer for automation and synchronization of the work and so, the utility of the machines is being increased. Loading, unloading, handling, stowing, programming will occupy much less time due to removal of human work force, a force which can easily create errors or wrong act, under the influence of many factors. Robots are programmed to minimize the time of preparation, handling, restraint and are real time controlled, supported by sensors and the central computer.

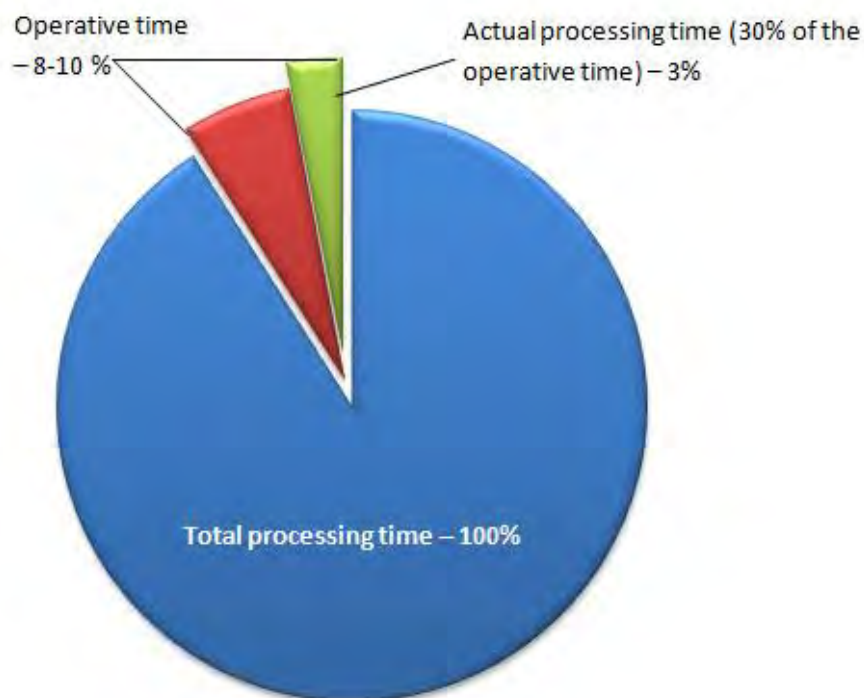


Fig. 2 – Actual processing timeⁱ

Specialty books highlight a number of advantages and disadvantages behind the decision of implementing a FMS. Trying to make a synthesis, the main advantages in terms of costs, are:ⁱⁱ reducing personnel costs and working conditions (e.g. no need for light or temperature controlled rooms), robot-aided manufacturing accuracy, no breaks, non-stop production. All these and other benefits related to the complexity of the products, lead to positive arguments.

Transition Costs - Problem to Be Optimized

After attending the implementation and acquisition stage of a flexible manufacturing system, other costs that are being generated during their operation are the so-called transition costs, which represent the effort of the system to transform its settings, from processing one type of product to another. These costs are still a problem that is widely debated. Some opinions tend to address the source of these costs in the programming stage of the system, a well-planned production generates low transition costs. Others believe that the degree of automation of the equipment and system causes these disadvantages. Perhaps the reality lies somewhere in between.

Taking into account random market demand and high costs of storage, the system would like to produce few products to avoid storage costs, but also to satisfy the market immediately, providing the required products in the quantities required. Famous researchers have established that using some exact rates of the system states, would preserve the competitiveness and the cost while satisfying the market.

The average transition cost of (ATC) is calculated as the arithmetic average of the overall transition cost of the system for an exact operating time, reported to the number of transitions made during the period. Costs can be divided into two categories ⁱⁱⁱ:

- ❖ General costs: costs to ensure conditions for achieving manufacturing tasks;
- ❖ Special costs: ensure the conditions for carrying out a separate task within the manufacturing task.

The Special Costs are basically those that interests us, as they measure the change effort of the system when introducing a new product, so when the workload is changed.

Table 5 - General and special costs in FMS ^{iv}

General Costs	Special Costs
General Training; Fixed expenses: <ul style="list-style-type: none"> ✓ Depreciation; ✓ Interests; ✓ Taxes; ✓ Insurance. Utilities: <ul style="list-style-type: none"> ✓ Space; ✓ Energies, etc. 	Variable costs; Manufacturing task dependent: <ul style="list-style-type: none"> ✓ Additional equipment fitting; ✓ Devices; ✓ Programs. Production batch dependent: <ul style="list-style-type: none"> ✓ Change and adjustment of the tools; ✓ Additional equipment; ✓ Setting the working parameters.

A fully flexible system, in which transition times are very small, works with low costs. So, these costs are bounded by the degree of automation and are compared with the preparing-finishing costs from the classic manufacturing that appear when a new batch is launched. The bigger the batch is, the lower are these costs. The bigger the variety of products is, the higher the transition and configuration costs are.

Transition costs are somehow an unconditionally result of using this systems. The most important criterion of optimization is the lowering of the transition costs. We will

search for the best way for organizing and processing the inputs in which the effort of the system is low and the changes are as less as possible. From a non technical point of view, we can say that we will search for the laziest solution in preparing the system. This means less and simple transitions.

Scheduling the Flexible Manufacturing Systems

Perhaps one of the most important issues related to the flexibility of a system is the scheduling of the products. The system should operate based on software. The problem can be viewed from two angles:

- ❖ The market demand for products must be fulfilled, which generally has no periodicity. To study this aspect we use the mathematical statistics, which creates reports on historical data provided by the company marketing departments. Such predictions are made to inform about the size of market demand. These results are determining the size of the production.
- ❖ The transition costs that occur are at minimum, only when creating an exact quantity, which in some cases may be too large, others too little. The generated products that could occur could be too many, more than the actual demand, or below, if we aim to optimize the production depending on the transition costs.

For both cases we must produce pieces, otherwise profit isn't generated. So we will try to meet demand, and at the same time to produce at an optimal cost as close as possible to the optimal cost. This issue is much debated by specialists worldwide, attempting to approach as much as a real solution and easy to implement.

Transition costs measure the effort of the systems to change depending on the production load. Perhaps the logical question should be: Why not produce all parts of a type once, to minimize the movement of the system so many times? The answer comes from the market. The market requires diversity, and the system is unable to produce flash a series of products that always meet the market. Manufacturing capacity of any system is limited.

On the other hand, the tendency today to use minimum stocks is a decision criterion in the sizing of the production. Especially in the current global financial crisis, stocks are liquid assets, which cannot be used immediately. Even if a company has profit, it may have difficulties caused by the lack of liquidity or because of their too high restraint in stocks.

The Quality Management theory encourages „just-in-time” production, a technique in which a piece is produced only when the demand on the market exists. This situation is favorable because of the lack of stocks.

More companies can survive the financial crisis because of their flexibility. They produce more products personalized for each customer. Not all the industries are affected by crises. New products can penetrate other markets. Quality should be strongly

pursued in the production chain more closely as usual, because it may make the difference between market players.

Quality and flexibility is a very broad topic, based on quality of the total system (TQM - Total Quality Management), from supply chain, production, distribution and post service site.

Programming a FMS

The problem of scheduling flexible manufacturing system is designed to determine the entry sequence of products into the system, in order to obtain low costs for the modification of the system from a previous state to a current one^v. Solutions to the next situations are needed:

- ❖ Determination of the optimal input sequences of the products in the system;
- ❖ Establishment of methods and algorithms;
- ❖ System Preferences (to achieve minimum transition costs);
- ❖ Similarity between products;
- ❖ Solutions for random production or for the demand of a product outside the established program;

This stage can be considered the one that gives coherence and content to a flexible manufacturing system, without it, optimization and performance can't be reached, the investment won't be recovered, and the company will lose market competitive advantage. Some specialists consider very important the hardware component of a system, and forget the technological scheduling. Systems programming costs can be quite high, due the specialized staff needed to optimize the system, but these costs bring more benefits later, achieving satisfactory results in the production plan.

Scheduling the production takes into account several criteria: shorter effective working time, reducing bottlenecks in the system, achieving maximum load and minimum stocks. A low transition cost of the system is a very complex topic. These costs are most relevant and more suggestive for a flexible manufacturing system, and makes the flexible manufacturing system uncompetitive. Two identical systems may have different efficiency depending on the production program.

Mathematical Game Theory - Game or Reality?

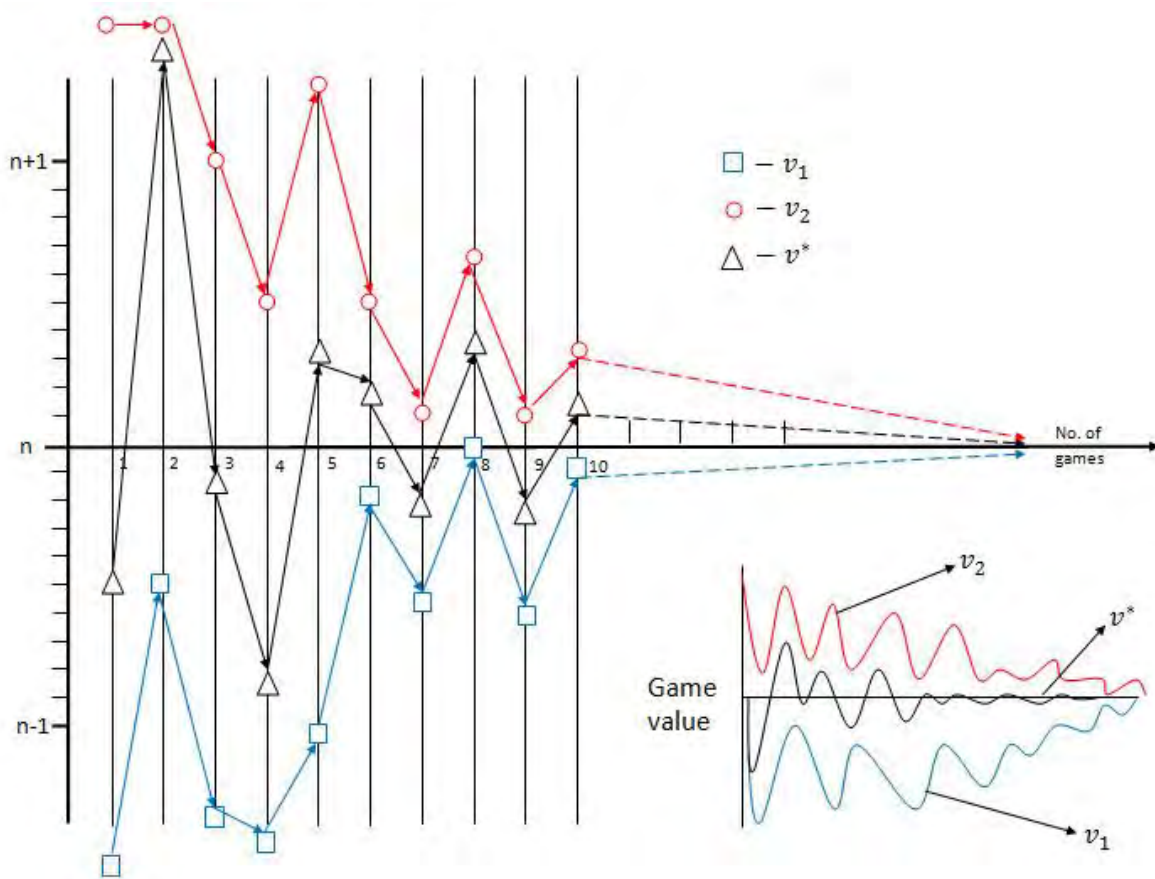
The Mathematical Game Theory is a way to solve programming problems within flexible manufacturing systems, providing a significant and important result. According to this theory, there is a conflict between two players, one maximized (that wants to win as much) and the other, minimized (that knows that he will lose and tries to minimize his loss).

In the flexible manufacturing system, the two trends can be found on one hand the states of the system, which is intended to be as little, to keep costs as low as possi-

ble, and on the other hand the external environment (market, customers) which would want to produce a wide diversity.

Game Theory is applied to an array containing the transition costs, which records the efforts of the system to transform itself for producing the needed parts. Playing the mathematical game, we obtain a value of the play for each game, which is actually the averaged of the last game values. This number may be regarded as the average transitional cost of the system that produced the parts up to that time. When the game stops, it can be noticed that the value of the average transition cost tends to reach the ideal theoretical value of the system, known by analytical calculations of the restrictions system. If this happens, then the strategies of the players can be considered, as shares of entry of the products into the system, so that optimal cost value is achieved.

The picture below shows that as the number of halves increases, as the two players' values tend toward the optimal value. Initially high values are being reached and the system is far from the optimal solution, but if the number of the games increases the values tend to the theoretical value of the game.



Legend: v^1 – Strategy of the maximizing player
 v^2 - Strategy of the minimizing player
 v^* - Theoretical game value
 Fig.2 – Game Theory Result

This system corresponds to a system that operates after the previously developed strategies from the transition costs matrix. These strategies highlight the differences between the products, and the efforts of the system needed to adjust itself to the differences between the pieces.

Results and Interpretations

We live in the consumer world, where every customer wants a product by its own nature and his own desire. The earth has a huge diversity and those producers will survive in the market, which always manage to be flexible on each customer preference.

The programming of the system is one of the most important steps to be done in order to achieve optimal costs.

Transition costs are considered the most important factors in minimizing the costs of flexible manufacturing and the solution for reaching high performance.

The result provided by the Mathematical Game Theory is very useful, indicating an ideal operating system when the differences between products can be quantified and all the production costs for each piece can be established. As a result, there are being offered the weights of the inputs that must be followed by the programmer to aim for the optimal solution.

Programming efforts are trying to bring more innovation in achieving the great ideal to produce unique parts at the same costs as the serial manufacturing.

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ⁱⁱ Ibidem i

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Non-Economic Consequences of Decisions Relating to Mining in Valea Jiului

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Abstract

This paper aims to highlight some of the non-economic consequences of the decisions with significant impact in Valea Jiului coal mining developments. It is possible that the solution to a problem of decision to be represented by a variant of a suboptimal action in terms of quantified economic and financial consequences but with some advantages in terms of qualitative consequences.

We will review some of non-economic consequences of those decisions that significantly marked the mining in the Jiu Valley (like Mineriades, massive dismissals, staff layoffs), leaving the reader to assess whether or not the decision makers have well "weighed" the decisions before their adoption.

Paper conclusions are that reducing staff by almost continual dismissal in conditions of sporadic and limited recruitment have led, on the one hand, at the aging and capping the remaining system and on the other hand to major difficulties in promoting good managers for the mining enterprises in Jiu Valley.

Key words: *miners, decision, consequences*

Introduction

The decision making is a rational, deliberative process on the basis of comprehensive information, taking a multitude of possibilities for action possible to apply in certain circumstances, to achieve the proposed objectives with the best consequences. Decision-making is described in terms of four stages, in accordance with the schema first proposed by John Dewey (Katz & Kahn, 1978). In sequence these include immediate pressure or felt difficulty experienced by the decision-maker, analysis of the presenting problem and its basic dimensions, search for alternative solutions, and consideration of the consequences of these alternatives.

In any specific instance movement through these stages and the decisional outcome itself will be affected by the nature of the problem, the organizational context, the personality characteristic of the decision-makers, and the cognitive limitations of human being (Katz & Kahn, 1978).

When strategic decisions are being adopted by top management and covers economic and social changes of a geographical area such as Jiu Valley coal basin, the decision making process involves completing all its stages: from formulating the problem, evaluating more possible alternatives to apply, the adoption and implementation of the decision- to the assessment of the consequences of application.

Basically, the decision is made after comparing a small number of variants of action applicable and building a hierarchy, based on results indicators to quantify the size of several socio-economic consequences of these variants. This, despite the fact that most theoretical and methodological sources recommend to identify and assess all applicable action options, taking into account as many consequences, including qualitative ones, which can not be always measured by indicators of results expressed numerically. Proceeding this way, it is possible that the solution to a problem of decision to be represented by a variant of a suboptimal action in terms of quantified economic and financial consequences but with some advantages in terms of qualitative consequences.

Regarding the merits of decisions relating to mining in the Jiu Valley that marked its evolution, it is noted that their vast majority were based mostly on analysis and comparison of two major alternatives. They aimed either to restructure completely the mining process in the Jiu Valley, either to split the C.N.H.S.A or to include the current company C.N.H.S.A. into a new national company.

Based on these benchmarks, we will review some non-economic consequences of those decisions that significantly marked the mining in the Jiu Valley, leaving the reader to assess whether or not the decision makers have well "weighed" the decisions before their adoption.

Decisions that significantly marked the mining in the Jiu Valley

Mineriades

Anthropological studies conducted before 1989 on socio-professional categories such as miners, farmers and forest-workers established some biometric parameters (e.g. miner fist had the largest circumference 31.43 cm) and reactivity indices in atypical limit situations (Caramelea, 1970).

It seems that those who have asked the miners to travel to Bucharest in January, February and June 1990 knew all these studies and their results and conclusions and through specific techniques of manipulation such as persuasion, disinformation and intoxication have put to work the miner fist for political interests.

Public appreciation for "high civic consciousness" and "exemplary dedication" in the "act of solidarity demonstrated in those days" have created a new and powerful syndical union leader and induced in the miners collective mental beliefs like: "we ask and they (the government n.a.) should give us what we ask for" or "we made them what they are, we gave them power-we can take it back".

Political involvement of unions and their leaders and the travels to Bucharest (also known as Mineriades) have created the illusion of an undestructible force of miners- a strong and powerful detachment of workers which are entitled to material benefits, not necessarily for their work but rather for their enthusiasm and "revolutionary spirit" that have shown when needed.

Multiple interventions of the unions in the mining management and promotion "by force" of some managers, who subsequently easily succumbed to the "ortacs" demands, has led to replacements of many well trained technicians with professional experience and expertise. They were moved on positions with requirements well below their potential. Thus with top management without expertise or experience in managing a mining enterprise it was not a surprise to find significant decreases in results of activity (as production and productivity).

Frequent replacements of the chiefs of productive sectors, of the directors of mines (at least 3-4 executives changed at every mining enterprise), of CEO of the C.N.H.S.A. (11 CEOs in 1990-2000) resulted in discontinuities and even failures in the management process which was not based on a strategy with clear objectives

and not clearly outlined any concrete programs for action. Against this background of lack of rigor and accountability dilution, frequent deviations from the technological discipline occurred. Even elementary protection and safety rules were violated which led to individual or even collective work accidents with victims that paid with their own lives those intolerable errors of management.

But the last two attempts to bring again the miners from Jiu Valley to Bucharest in 1999 concluded with "Peace of Cozia" and confrontations between miners and order forces in Stoenești-Olt, marked the beginning of the end and collapse of a myth—the myth of the strong Jiu Valley miners.

The first attempt of restructuring mining in the Jiu Valley

In 1997, international financial institutions pressured the Romanian government to initiate measures to restructure the industries in general and the mining industry, in particular. Thus were adopted two emergency ordinances, which gave the state sector employees the right to enter in an unemployment state voluntarily, in exchange of financial compensation. One of them (OUG no. 22/1997) related to restructuring the mining sector, provide depending on seniority, some financial compensations equivalent to 12 to 20 average gross salary per branch, payable in one installment tranche.

Also, at that time, a protocol was negotiated with the mining unions, reaching consensus on the creation of a specialized government agency seeking to alleviate the social impact of dismissals and increase the number of job offers in the mining regions. Special laws were promoted declaring mining regions as "unfavorable areas" and establishing tax incentives for investors in these areas. Also active government measures began to create employment possibilities for unemployed miners dismissed at their demand.

The first significant restructuring in the Jiu Valley mining took place between August 1997 and January 1999 and aimed at substantially reducing the number of employees of the National Coal Company SA (CNH - SA) Petrosani. By applying these measures the total number of staff employed at CNHSA Petrosani halved and the number of technicians and administrative (TESA) personnel was reduced by approx. 30%. To assess the consequences of the restructuring, six months after implementation of the OUG nr.22/1997 a social study has been conducted whose main conclusions are presented as follows.

Most miners had fired the illusion that since the order prohibiting them from seeking jobs in mining only for a period of 12 months, they will also recommit to the mining sector after those 12 months, but after that it will be restructured. But what they believe these miners remained as illusion, even until today. The same study showed that the vast majority of dismissed (70%) already spent almost the entire amount received as compensation payment for household consumption, household purchases of goods and payment of old debts. Few of them (only 5%) have tried to open their own small business, and although a high percentage (almost 65%) tried to find work, only a small proportion (5%) were able to engage in other industries. The bitter disappointment and implicitly most vehement protests have occurred in the Jiu Valley, owing to the lack of other complementary work alternatives to mining. Even though it was es-

timated that a large number of former miners will return to their native places, eventually was proved that it was an unfounded assessment because only 5% of them left the Jiu Valley.

Further restructuring

Restructuring undertaken during the years 2002-2008 and in 2010 led to the closure of some mines with tradition in the Jiu Valley like Aninoasa and Dâlja. The layoffs made that in CNH – SA mining units to remain in the present day only 20% of total staff existing in 1997 and 28% of foremen technicians and TESA staff.

Almost continuous reduction of staff through dismissals in condition of sporadic and limited further recruitment have led to an interesting situation in terms of structure and in terms of future developments. The technical, economic, professional and administrative staff (TESA) has a relatively high proportion (about 11%) of all employees CNH. SA

However there are substantial difficulties in promoting managers (from workers supervisor, mining sector chief, to the director of the mine) for the lack of potential candidates with an appropriate experience and qualifications. To overcome this situation the measure of promoting training courses in coal mining has been adopted for engineers with a basic training in mechanical or electrical field.

Following the interruption in employment in mining enterprises, the average age of staff is approaching 40 years and is relatively high in terms of retirement at 45 years in this field. Thus most of the employees have obtained easily higher classes of employment which led to a climate-sufficiency and complacency. To overcome this situation it is necessary to grant mining CEO to hire or dismiss the mining workers in order to the labor market laws to operate and function also in the mining in the Jiu Valley.

These developments have that Jiu Valley's mining and mining interests of young people to drop significantly and therefore the number of those who wish to work in the Jiu Valley in mining field is constantly decreasing.

Conclusions

Since 1990 political decisions combined with unional decisions to use the miners big fist in the name of "civic consciousness" and "workers solidarity" created the myth of a powerful workers detachment able to put down a prime-minister, to revert a political regime etc. Of course this perception had some favorable consequences at local level- for the miners and their families, but at national level and even international had adverse consequences.

Reducing staff by almost continual dismissal in conditions of sporadic and limited recruitment have led, on the one hand, at the aging and capping the remaining system and on the other hand to major difficulties in promoting managers for the lack of potential candidates even if engineers of other specializations (mechanical or electrical) have completed trainings and specialization in mining technology. The first massive

restructuring of working staff in the CNH-SA Petroșani have induced a state of sufficiency among those remaining in the system and generated a lot of problems both at the local administrative governments and in the families of the former miners.

Following these developments in the mining in Jiu Valley young people interest in mining has decreased dramatically and therefore the number of those who wanted to become a mining engineer and mining engineer graduates at the University of Petroșani has been a steady decline. This lack of those who come from generations ago and a decrease in mining interested youth can lead to a paradoxical situation that to maintain and / or restart recovery in the Jiu Valley coal reserves may not have the necessary qualified human resources. This social and mental development bleak and uncertain future looming for the Jiu Valley coal mining.

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Management of Personnel Potential in Public Authorities and the Enterprises of a Machine-Building Complex: the Comparative Analysis

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Abstract

More and more attention in modern management science is given to research of personnel potential of the organisations and methods of its development. Management of development of staff potential acquires more and more great value as the factor of increase of competitiveness, long-term development of the organisations. The major factor of success for the modern organisations becomes continuous theoretical and practical training of the employees, development of the personnel potential. In modern Russia's economy the acute shortage of qualified personnel of all levels is observed: from working and local experts, to engineers, leading experts, and chiefs of all levels. The given problem forces to pay special attention on research of personnel potential of the organisation. Especially actual is comparison of existing features and specific methods of personnel potential formation in state structures and commercial sector.

Key words: Personnel Potential, Machine-Building Complex

Introduction

In the history of studying problems of mechanical engineering the special role is played by empirical researches on problems of shots, work, motivation, a management efficiency in personnel potential and productivity etc. Bases of such applied researches of machine-building complex problems have been put in Russia in beginning XX century by so-called "factory" sociologists: A.K.Gastev, S.G.Strumilin, P.M.Kerzhentsev, O.A.Ermanskij, A.G.Rashin, etc.

In the history of studying problems of the state and municipal management in Russia it is possible to note such authors as J.Starilov, D.Bahrah, V.Bojkov, E.Ohotsky, E.Maslennikov, A.Lukyanenko, S.Grebenichenko, V.Sergeev, V.Ignatov, V.Sulemov, T.Bazarov, E.Aksenova, etc. Within the limits of public service sociology empirical researches by N.Baykov, V.Grechihinym, G.Zinchenko, V.Maltsev, T.Kalachevoj, V.Slatinovym, V.Popovym, T.Zerchaninovoj, etc. Among priority many authors (N.Chevtaeva, S.Ananeva, A.Mitin, A.Belkova, V.Viljunas, S.Kostin, A.Pankova, V.Skvortsov are carried out, etc.) consider questions of business and professional career, motivation of formation and professional development of personnel potential of the state and municipal service.

Research Objective

In this article we set as the main objective the comparative analysis of conditions, features, present methods, technologies of personnel potential management in public authorities and the enterprises of a machine-building complex in Sverdlovsk region.

Methodology

The research methodology is built on results of the social researches conducted in 2006-2008 at the enterprises and in public authorities of Sverdlovsk region. The research technique includes mass interrogations taken in these spheres both expert interrogations and interview, focus groups and the analysis of documents.

The basic researches

1. The sociological research from October, 2008 – “Social capital of civil servants”[1]. Object are - civil servants of executive powers of the power of Sverdlovsk region. Volume of a sample are 347 respondents.
2. «Development of the state civil service of Sverdlovsk region and municipal service of Sverdlovsk region» (October-November, 2007) - civil servants of executive powers of the power of Sverdlovsk region are interrogated during two researches: questionnaire and expert. As a whole the sample volume are 449 persons. The error of sample does not exceed 2 %;
3. «Marketing strategy of personnel politics in enforcement authorities in Sverdlovsk region. Research of civil servants in the Sverdlovsk region, spent to the period: November – January, 2004-2005. The total of experts are 50 persons. As a whole the volume of a sample of respondents and experts during information gathering has made 350 persons on Sverdlovsk area.
4. Sociological research on a theme «Conditions and methods of development of personnel potential of personnel Uralmashzavod», spent in July, 2008 [2]. Object of research – workers of Uralmashzavod. The sample volume are 400 persons. Results of the given research can be extrapolated on corporation of a machine-building complex of similar type with number of workers more than 6500 persons.
5. «An expert estimation of the concept of development of personnel potential of personnel Uralmashzavod», spent in August, 2008. The total of experts are 26 people.

Definition of Concepts

The phenomenon of personnel potential is a property of the organisation, its integrated characteristic which contents of constituted by the quantitatively-qualitative parameters of shots considered in their interrelation and interaction, dynamics of development and not reduced to the mechanical sum of potentials of separate workers. The potential is the dynamic characteristic realised during fulfilment of work, actions, activity, the activity, passing in the development all above-named levels. The term «personnel potential» has been entered into a scientific turn no more two tens years ago and yet has not received definitive substantial registration. Nevertheless, the problems connected with management by the personnel, personnel potential of any sort of the organisations always were in sight of scientists.

In a postindustrial society the maintenance of work of the personnel and structure of a manpower of the organisations in private and state sectors has changed qualitative characteristics of the personnel, its personnel potential, accordingly, have changed.

The majority of scientists describes personnel potential of the organisation, using the resource approach, i.e. meaning by the term available, especially hidden, for the present not used possibilities, abilities working, some kind of not demanded personnel reserves.

The personnel potential can be structured on its components: personal (properties, lines of the personnel, level of its general culture) and professional (qualities of the personnel the organisations necessary for professional work, level of professional

culture). Intrinsic characteristics of personnel potential are: institutionality, integrated approach and integrity, ability to formation.

Management in personnel potential - the project of activity including system of administrative technologies, methods and the actions directed on perfection of personnel potential of the organisation for the purpose of effectivization of work. To management methods in personnel potential usually carry: methods of adaptation of new workers, methods of valuation and certifications of the accumulated potential and actual competences, training (in various organizational forms, including self-education), management of career and management of a personnel reserve, methods of stimulation and motivation of work.

Estimation of Personnel Potential

The estimation of personnel potential of the organisation can be carried out by means of system of indicators (statistical and sociological). Statistics indicators are: number of staff, its distribution on age, the experience, a floor, formation, posts etc.; sociological indicators are– availability of a certain professional knowledge, quality evaluation of professional training, retraining, valuable orientations in sphere of work, a trade, satisfaction work, motivation system, training system etc.

Results of the Analysis

1. The enterprise of a machine-building complex.

The Factory personnel possesses necessary for realisation of the activity by knowledge and the abilities acquired in the course of reception of this or that educational level. Nevertheless, some fears within the limits of personnel potential are caused by presence of certain quantity of workers with not finished average general education and their presence even in management on quality. It can testify to absence of base of the basic theoretical knowledge in structure of personnel potential.

The basic problem of personnel potential development is considered a low indicator of quantity of the persons who have received additional vocational training, passed improvement of professional skill, training and conversion training etc. as professional retraining and improvement of professional skill act as a component of process of increase of level of personnel potential of the personnel.

Huge value has performance of official duties according to the received speciality. The quantity working on a speciality at factory makes 64,0 % interrogated. 36 % of workers work not on a speciality. In industrial production sphere such quantity of nonspecialists causes fears, especially, if it concerns the working personnel which is carrying out specialised actions with application of physical work and service of special programs and the equipment.

The highest percent working not on the speciality is observed among workers of an average link – 50,6 % interrogated. It is more likely connected by that the average

link carries out the general duties on a management of actions of the lowest link and submits to the orders given by the top echelon – a management. It assumes possession a complex original universal competencies, not demanding a rigid binding to specialisation. Among workers and heads on 30,0 % accordingly working not on a speciality.

Such level of the involved experts not on their basic speciality signals that effective interaction between corporation Administration as the employer and system of hiring and personnel training is broken. It is possible to consider as result of it that a professional knowledge and the abilities received by workers in the course of reception of the basic vocational training, are used by them not to the full (and such workers on third in each category at least), and it affects level and force of professional potential. It is known that uselessness formations and consequently, and highly skilled work, conducts to loss of value both the formation, and professional skill.

The tendency of presence of requirement for knowledge updating is and this requirement is available is shown at those workers which potential is in a development stage. On the one hand, as well as workers of advanced age, they already have a wide experience of professional practice and skills, on the other hand (unlike youth) – their complex of a professional knowledge already demands updating, reconsideration.

6,4 % of the interrogated employees consider that the volume of professional skills does not allow them to perform work qualitatively. Among them workers with the experience of work prevail more than 5 years. During too time of 28,4 % of workers declare that than professional skills available for them is faster enough for qualitative performance of the official duties. Basically, thus this question was answered with the young men possessing the insignificant experience of work less of year. This data also confirms the tendency in requirement of updating of knowledge at workers of middle age.

Workers have listed the whole spectrum of areas in which they would like to expand or acquire knowledge. Priority positions occupy such areas of knowledge as computer development, (metal processing, heat treatment, wiring, mechanical engineering, economy/jurisprudence, foreign languages. It is possible to tell that 50,0 % of workers are focused on expansion of some a professional knowledge, abilities, skills. So, that at enough considerable quantity of workers of factory the requirement for professional development and growth, updating of the knowledge base and skills on a speciality is diagnosed is evident, and it, in turn, an obvious indicator of that is necessary to satisfy such requirements, and process of such diagnostics and satisfaction demands management, i.e. accurately adjusted control system in personnel potential.

To the methods of personnel potential management usually carry out: methods of adaptation of new workers, methods of an estimation and certification of the saved up potential and actual competencies, training (in various organizational forms, including self-education), management of career and management of a personnel reserve, methods of stimulation and motivation of work.

All these elements are present at management structure in personnel potential on Uralmashzavod. In realisation of the given methods is engaged as the specialised centre of training, department of development and a personnel estimation, and management on the corporation personnel, responsible for management of the corporation personnel. It testifies to excellent possibilities of development of personnel potential. However here it is necessary to pay attention to conditions of application of the given methods in the specified organisation, on efficiency of their use, on an estimation of efficiency of their application from the point of view of the personnel.

The basic stimulus inducing to self-education for heads and experts, are desire to develop an outlook. To be interesting to itself and associates, to own the necessary and competitive information – here, according to interrogated, the keystone to success. For workers on the first place the desire to develop an outlook and desire to improve professional skill is put forward.

So, we can draw a conclusion that the requirement for professional development by means of self-education is most shown at level of workers, other categories of employees are inclined to self-educate in the personal nonprofessional purposes.

The enterprise, according to workers, could promote process of self-development of the personnel by means of 1. Creations in divisions of specialised libraries (containing the literature, directories, textbooks of methodics, grants etc. on the basic specialities \trades); 2. The organisations of possibility of participation in scientific conferences on behalf of the organisation.

Powerful part of workers, having accurately certain requirement for career growth, have no possibility of its adequate satisfaction. And if heads and experts consider that their career growth depends, first of all, on own resolute actions workers are assured that their career depends on decisions of a direct and higher management. Hence, the impossibility of satisfaction of career requirement depends, first of all, on initiative and independence of workers of an average and the top echelon both concerning own career, and concerning career possibilities of subordinates.

Thus, estimating career possibilities of the personnel, it is possible to ascertain, management in personnel potential through career, career purposefulness is quite justified. At Factory the most part of employees of all ranks feel requirement for career growth, however possibility of satisfaction of career claims which depends on initiative and desires of employees in a greater degree becomes a problem point here.

The analysis of opinions of respondents concerning applied methods of development has shown that it is possible to divide methods into the most effective and methods, "useless" from the point of view of the personnel.

To certainly effective preceptorship, training and improvement of professional skill system concern.

Preceptorship – 64,0 % of workers have estimated as quite developed and effective method of development of the personnel. 84 % interrogated also are assured that the preceptorship system is not simply effective, but also really helps with the plan for development of personnel potential of the personnel.

Also as an effective method and system of development of personnel potential of the personnel workers have estimated system of training of the personnel - 50,0 % – 60,0 % of workers in independence of what category concern (heads, experts, working) have noted a high degree of quality and the organisations of process of training at the enterprise. Qualification/category increase - as an effective method of development of the personnel have noticed mainly working (63,0 %) – owing to that this method is directed, first of all, on development of the given category of workers.

Motivation – in this case opinion of workers were divided on two polar groups. The first group includes 22,1 % of workers which consider that the existing system of motivation at the enterprise is absolutely inefficient. The second group (20,9 % interrogated), consider that the existing system of motivation at the enterprise does not bring any results, that is is actually inefficient.

Adaptation of new employees – as it is possible to allocate two groups of workers. Workers who consider system of adaptation of the personnel as a whole productive, but with a number of insignificant restrictions (28,6 %) - and those who considers that adaptation system is absolute *нерезультативна* (22,6 %). Here it is necessary to notice and that on a question on, whether there is an adaptation system at the enterprise in general, 43 % of workers have found it difficult to answer. However that such system is necessary for workers and the enterprise, 100 % of workers have expressed.

Certification and a personnel estimation - without dependence from age, the experience of work and a category is not present the unequivocal relation from outside workers to the given procedure of development of the personnel. The reason of it is covered that 30,0 % of workers have no representations about certification and a personnel estimation, 50,0 % take a positive view (but it is necessary to mean that from these of 50,0 % many also have no accurate representations about the purposes and procedure problems). And 20,0 % of workers concern extremely negatively certification and a personnel estimation.

Connected with certification and an estimation of the personnel workers carry to number of the positive moments:

- Increase of level of personnel potential by means of revealing strong and weaknesses of the concrete worker. At the expense of preparation for the procedure. Workers will constantly be in a tone. And as consequence, competent arrangement of the personnel (personnel rotation), possibility of career growth and wages growth.

Number of the negative moments concern:

- A stressful situation, for many workers.

- A formalistic approach and absence of objectivity from outside a certifying commission. As consequence a lawful way to get rid of «undesirable elements».
- Huge expenditure of time.
- The qualified expert not always can competently state the thoughts.

Existing level of personnel potential of the personnel of corporation can be estimated as average. An estimation of efficiency of a control system of it – low. It is possible to ascertain that in corporation management in personnel potential it is not revealed any system, purposefulness, a coordination.

An existing huge variety of methods of development of personnel potential is not accompanied by corresponding techniques of their consecutive and co-ordinated realisation. Each of applied methods is realised also not according to requirements of the personnel, without corresponding informing and productivity. On realisation of methods of development huge influence renders also a social factor – absence of accurately built social policy allowing the personnel to be loyal organisation and to feel need for continuous development and self-education.

As a result, the object of management – personnel potential of the personnel – remains is uncontrollable that, in turn, leads to a development stop, decrease in level of potential.

2. Government structures.

On the beginning of 2004 the quantity of the civil servants having the higher vocational training, has made 62 %. From them of 38,2 % have higher education on a speciality of an economic and administrative profile, 14,8 % – the juridical education, 23 % – the higher technical education. Currently vocational training has 94 % of state employees. Officials in a considerable part have received the basic formation more twenty years ago – in 1989 and in earlier years: 45 % from number of the answered. In view of special qualifying requirements to the state employees replacing the state posts in again created bodies, those shots which rather have received recently the necessary vocational training of the state employee including many of new disciplines, not taught still any about fifteen years ago have some advantage. The criterion of professional readiness is solving at selection of shots in "new" state bodies.

In the Soviet conditions state structures were, mainly, bodies of the direct government a national economy and social sphere. Actually, workers of these bodies should be, first of all, experts in certain fields of activity of the subordinate enterprises and the organisations (technical, industrial, economic, etc.) and only then - workers of the government. In the conditions of a lawful state from workers of executive power not so much profound knowledge of technology and the organisation of work of subordinated objects, how many ability to see their behaviour and consequences of their activity in legal and financial and economic forms are required and to undertake corresponding influences [3].

Most likely, presence of this problem does not allow to use a simple way of elimination of the reasons interfering that the state had enough of professionally prepared experts.

Now in state structures work with personnel is dispersed basically between different services and divisions. So, number of employees, the general wages fund usually defines a planning section; preparation, retraining and improvement of professional skill of shots the training department (carries out management of shots and awards); work rationing, the labour productivity analysis, an establishment of categories, salaries of a wages, number of experts, drawing up of the list of staff are usually function of department of work and a wages; the staff department is engaged in reception and dismissal of employees, the analysis of their movement, labour discipline maintenance; the substantiation of norms of work, carrying out of actions for their updating, mechanisation and automation of productions are in conducting technical, analytical department, etc.

The basic functions in which personnel services should be engaged: the personnel account; forecasting and planning of requirement for shots; the organisation of a set, selection, preparation, retraining, moving, dismissal of workers; studying and an estimation of shots of heads, experts and representation to a management of recommendations about replacement of vacant posts by those or other persons; formation of a personnel reserve and work with it under special programs; participation in certification of the personnel and actions for its results.

Nowadays personnel services of state structures do not meet new requirements of personnel selection, their activity is frequently limited basically to the decision of questions of reception and dismissal of workers, registrations of the personnel documentation. There is no uniform system of work with shots, first of all system of scientifically well-founded studying of abilities and propensities, professional and official advancement of workers according to their business and personal qualities. The structure of personnel services, qualitative structure and level of a payment of their workers do not correspond to problems of realisation of active personnel selection.

Efficiency of activity on search and selection of new workers raises, if this direction of work is carried out under a uniform management and co-ordinated with other fields of activity connected with management by the personnel, beginning from conducting the personnel documentation and finishing rationing and social protection questions. It allows not only to adhere to more accurate criteria and procedures by search and selection of shots, but also provides good results in professional and social adaptation of new workers.

Half occupying the higher posts of civil service have passed to them from a reserve, two thirds occupying the main posts occupy them under the invitation of the head, the greatest part of the officials passed free competition and translated from other posts, replace leading posts of civil service (the one fourth and one tenth parts accordingly). The quantity of the officials who have arrived on service which were not exposed to qualifying tests, says that democratic procedures of formation of the personnel case of state employees were not included also yet into norm of social action. In turn it can raise the doubts in level of competence and other qualitative characteristics to which the civil servant should answer.

The requirement for career growth is felt hardly by more half interrogated (51,3 %), 36 % from them estimate the chances to rise upwards on an office ladder as averages, 33 % - above an average. A career role as priority for themselves 41 % interrogated (have defined 81 % from them – women, 37 % - youth). There is a dependence between a post and level of career aspirations of civil servants: the more low the post, the is more level of requirement for the further promotion. The requirement for growth is most expressed at occupying the senior posts of civil service, and least – at occupying the higher posts. Among youth wishing to promote – 80 %, among middle aged – it is twice less (45 %).

The most important factors for advancement on an office ladder have made business qualities of the official, level of its qualification and an operational experience (them 60 %, 56 % and 50 % of respondents accordingly have noted). The good relation with the heads and formation (38 % and 28 % accordingly) Further follows. Equal quantity of respondents such factors as have noted moral qualities of the official and the help of friends (17 %). It is necessary to consider it as the positive phenomena in civil service system. Nevertheless, here again there are some deviations. Dependence of prioritiveness of this or that factor from age of the respondent is curious: young officials on the third place in hierarchy of factors put good relations with the heads, morals and the help of friends – on the fifth and seventh place accordingly. Officials of middle age more than others appreciate the help of friends. That women-state employees much above estimate influence of relations with the heads on promotion, than men is remarkable also.

The interesting picture opens and at dependence on work in the concrete ministry – the importance of good relations with the heads is included into a three of leaders in the Ministry of Trade, work department, management of shots and awards. The triad of the values chosen by state employees, is traditional enough – a family (73 % of respondents), work (52 %), health (44 %). These are typical values for any individual and they do not contradict dominating culture. The following block consists of money (42 % of respondents), prestige (30 %) and career (24 %). Here is how time here appears that valuable axis, moving the individual in the conditions of transformation of forms of government. A quarter interrogated are focused on career, almost third - on achievement of the special status, and value of money is built near to value of health. The values focusing on the purposes, allow to allocate following purposes of state employees: « Prospects of professional growth », " desire to earn more ", " aspiration to take a worthy place in a society "to realise itself in management» [4].

Among concrete components and ways of development of the social capital have been named: noegenesis and information of professional character (47,6 %), an establishment and development of a network of social communications and relations (19,6 %), and also reception of new socially-professional experience (an exchange of experience with foreign colleagues – 15,2 %).

Among priority directions of increase of level of the professionalism civil servants consider strict execution of norms of the legislation (60,1 %), revival of confidential relations between the power and a society (59 %).

According to serving priority efforts should become strengthening of motivation of effective work (19,3 %) – the given moment finds the acknowledgement in necessity of interrelation of estimated actions of work of employees and the subsequent material

or official growth. The following on importance the steel moments: strict following to laws (16 %), reduction of structure of authorities in conformity with requirements of a society (12,6 %), strengthening of position of employees, their authority (11,8 %), improvement of vocational training and retraining of employees and maintenance of stability of shots (on 10,1 %).

According to employees, at carrying out of an estimation of results of professional work, it is necessary to pay attention to following characteristics: qualification (28 %), working capacity (21 %), an operational experience (18 %), ability to training (14 %). Opinions of employees concerning that are curious, how much existing system of an estimation allows to consider results of professional office activity of officials.

Affirmative replies only not much more exceed negative (45,5 % against 39,4 % accordingly). There is a strange situation: at a positive estimation of the certification employees doubt that it estimates their professional work. There is a question: what then it is estimated during certification? It is necessary to notice that certification is rather effective tool of an estimation of professional work of employees. Thus there are some moments of its practical realisation which should be considered: regular carrying out, interrelation of its results with the further position of employees, use of various methods of an estimation.

Basic Results

By results of the carried out analysis following moments are revealed:

- the tendency of staff increase both in public authorities, and at the enterprises of a machine-building complex is observed.
- the disproportion of number of gender groups is marked: in government bodies by a principle of official level: a prevalence of women on junior posts, men – on the maximum. At the enterprises - the woman dominate as a whole and on the average posts which have been not connected with physical work.
- On a length of service the identical tendency – insufficient number of youth in staff structure is observed and the prevailing quantity of employees is more senior 50 years.
- Educational level of civil servants is high enough, however, the higher education on a professional speciality has a small number of staff. At the enterprises the return tendency – the small percent of staff has the maximum or profile education.
- Health is evaluated by employees as satisfactory, but they have stress, caused by a number of the reasons, basic of which congestion of the working day, information stress, uncertainty in the job warranty are.
- the Condition of an is social-psychological climate in collective is satisfactory, but with a management communications are adjusted worse, than with other groups.
- the survey has shown that creative possibilities of workers are limited, as they lean against opinion of the chief at decision-making, initiative display is not encouraged.

- the Analysis of professional characteristics testifies to the following: in spite of the fact that the percent of the workers having higher education (at the enterprises) and formation on a speciality «ГМУ» (in public authorities) is low, is not present requirement for it. Dependence is revealed: than the respondent, the more at it a length of service is more senior, the it is less requirement for acquisition of knowledge.
- the Basic motivating factor in work – material, career, professional growth it are not. An inefficiency of use of such mechanisms as: competitions on replacement of vacant jobs, a personnel reserve, adaptation of new workers.
- the Control system in personnel potential is equally imperfect both in authorities and at the enterprises. Both officials and workers of a machine-building complex feel requirement for updating and change of knowledge, for the organisation of special preparation and adaptable programs.

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The Use of Document Management as Solution for the Strategy to Increase the Profitability and for Organization Development

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Abstract

The document is an important communication instrument for the organization departments and for the relation with other institutions.

The number of documents and the volume of information within the organizations is growing, so without a proper management of the document flow the activity of the enterprise may be blocked or delayed.

The control of the documents, their workflow, the manager decision-making speed are the main reasons for implementing a document management system.

The computerized document management can become, therefore, an important advantage in the current competition context of the organizations.

Regarding this, the paper presents the main issues of the document management system use.

Key words: management system

Introduction

Information management and efficiency in any organization is a complex and difficult task but is one of the cornerstones of the organization's activities. The continuing for efficiency increase determines the companies to turn towards software products that can resolve these issues.

Organizations are concerned more than ever by the document management. More than 80% of the information in an organization is unstructured.

Due to the explosion of this information, organizations need solutions and strategies to help them to control and transform it into an asset, transforming risk into opportunity and reducing the cost for using information.

According to a study presented by Xerox, businesses that pay attention to how the documents and information are managed are better equipped to reduce costs, to respond faster to changing market conditions and to increase their profits.

Thus, 68% of the 550 executive directors of some U.S. organizations who were interviewed in the study, said that effective document management initiatives generate competitive improvements, profits and revenues.

Main results of research are:

- 2 / 3 of survey respondents have programs to reduce total cost of document management, reducing cost estimations are 20%.

- While those working in the field of knowledge (the best paid in the economy) use 20% of their working day to search for information in documents, in approximately 50% of the time they don't find what they're looking for.

- Survey respondents (66%) agreed that effective management of documents affects customer services.

- More than half of the information that companies make available are in the form of paper documents. Currently, over 60% of respondents have not successfully integrated paper documents into their digital workflows.

Other additional findings of the study are:

- While the paper continues to play a key role in business, who have significant increases in profits have more digitized work processes (49%) than those who have seen average profits increase (30%).

- Some informational barriers are the content or conflicting file formats (27%), problems of search / identification (22%) and increasing regulatory restrictions (17%).

- The respondents of the study confirm the importance of addressing structured data (forms, invoices, etc.) as well as unstructured data (email, Word documents, web, etc.) within a document management strategy.

- Approximately 40% of organizations indicate the important role of the IT managers in the of the change processes relating to organization documents.

The need of using the document management systems

The document is an important tool of communication between the departments of a company. Monitoring and control of the documents, document management, the speed of decision-making for the departmental and top level managers show the importance given to the informational circuit. The main concern related to the organization documents is how they are organized in order to monitor the internal information flow.

Document management is the process of managing documents throughout their lifecycles, through the process of creating, revising, storing, sharing, distribution, archiving and to their destruction.

The organization document management represents a system that would allow the movement (for information, checking and approval), storage and retrieval of electronic documents, being able to know at any time the state of a document (sent for review for approval or already approved / rejected).

Work in a modern company requires a large volume of documents, which means a large amount of paper. File volume increases more and more, so that the documents are hard to find, they can be borrowed and then „lost” on the desk of a colleague. Studies of the American company Delphi Consulting shows that „specialists are losing more than 500 hours per year just looking for documents, documents that you find duplicated, in average 8-9 times in the network”.

Such situations occur when:

- looking for a signed contract with one partner;
- want to find information on projects undertaken by the firm in previous years;
- we need tenders submitted;
- want to consider bids received from others;
- search for previous annual reports;
- search for tests, etc.

In most of the cases listed, there is time pressure. Whether information is required for an internal review, to respond promptly to business partners or close a deal, the time and human resource is very precious.

This situation is because each employee has different structures for organizing data (files, folders), document classification is based on different criteria and there is no record of archived documents to facilitate subsequent location. This leads to fragmentation in the activity of the person or persons involved, inefficient allocation of human and time resources in searching for documents and delays in fulfilling the duties.

Processes involving document operations in the organizational environment

In an organizational environment there can be identified two types of processes involving document operations:

1. Document management processes, including document management activities as any organizational resource. Their administrative procedures are related to the significance of the documents. To define the correct policies for use and storage of documents there is a classification of documents by their level of importance:

- General documents include all relevant documents necessary for the organization in relations with other organizations or to base tactical and strategic decisions from the final processing stage.

- Work documents, documents issued by various groups within the organization, according to the policies, programs and management interests, which may appear after processing the general documents.

- Individual documents, representing personal notes, diaries and information organized to address service activities. They can be used for drafting work.

- Private documents, personal interest accepted morally by the organization. They may be CVs, personal emails, telephone books, etc.

2. Business processes, which include activities to create, update and review the documents during the business activities. The main categories of business processes are:

a) business processes or activities organized around the main production activities which generate the following types of documents:

- International conventions, annexes and amendments, the procedures for launching and implementation of production;

- International recommendations regarding technical standards (working documents or final standards);

- Standard production files, industrial designs, trademarks. The characteristics of documents generated by this class of processes are:

- procedural highly structured;
- standard and final presentation formats;
- control over the workflow, from creation to final version, with particular importance in their integrity management.

b) business processes for decision, tactical and strategic actions support generate the following types of documents:

- technical cooperation projects (project documents), programs and regional projects (program reports, country reports);
- economic cooperation projects (assistance in the elaboration of development strategies and coordination of business);
- contracts, memoranda, etc.

c) business processes for knowledge development and dissemination of information using documents for acquisition, organization, storage and dissemination of information:

- Economic, social and demographic geographical information (economic surveys, statistical yearbooks and other reports);
- Educational, scientific and cultural information
- Information on regarding human rights, basic needs insurance and development opportunities;
- Market Research, etc.

d) Process oriented towards government organizations generate documents required for senior executives and business management persons:

- Board Documents, Government and other mechanisms executive documents
- Documents for board sessions, general meetings, the Security Council, Parliament etc.

e) management and conduct administrative functions oriented processes which generate departmental documents:

- Internal procedures for organizing and conducting activities;
- Internal working documents and analysis;
- Reports on activities carried out in foreign travel etc.

In this context, the statistics show that for a transaction, there are now required two or more documents than five years ago. Introducing a system of quality assurance (prerequisite for companies that wish to fit European standards), brings an impressive volume of documentation required for the organization flow or in relations with partners. In response to such problems arose for document management systems. These are systems that allow the movement (for information, approval or amendment), storage and retrieval of documents in any electronic format, with facilities to connect to other computer systems or electronic devices (eg, from the connection to scanning devices paper documents may be brought automatically into the system).

Document management – a new value system for the company

Handling and managing documents overlaps with daily work in an organization. From the financial and legal articles to daily correspondence, all need to be managed in a way to streamline business processes.

Document management systems are an obvious value step in the information era and they are based on existing work systems, which involves keeping a duplicate of the documents, their authentication by signature, approval of the people informed and keeping them in an environment with controlled access.

The digitalization is based on these principles, with the same purpose but with an added value brought by optimizing the flow of documents and their quality in terms of security.

Document management programs are part of the companies that consider their sensitive and critical data to company profits. As the information is constantly migrating to the digital environment, it becomes increasingly vulnerable to use failures and malicious attacks that lead to information corruption or theft, protecting the valuable information becomes an important issue.

The implementation of informational solutions to make this process work has become in recent years as a rescue solution. Data processing speed, large storage capacities available on the market, quality scanning equipment and software for text recognition Optical Character Recognition (OCR) are all arguments for the transition to electronic media system.

The evolution of document management systems

The history of document management systems reveals two major development periods.

The first developed solutions were systems where the main purpose was „electronic archiving”, representing an alternative to micrographic. At that time, 90% of the solutions were concentrated in government and bank-insurance areas.

The second period begins in 1995 with the evolution of networking, multimedia solutions and computing in general. Therefore:

- ❖ electronic document became multimedia: it is not just about text, but also images, sound, video, etc. that can be integrated;
- ❖ a great progress which has been done is related to the increasingly low cost of storage capacity (eg DVD)
- ❖ there appeared more and more standards for network protocols, operating systems and connectivity between different platforms;
- ❖ human-machine interfaces have been simplified to make computing more accessible to more people.

The justification for the purchase of a document management system becomes an important and integral part of the information system of the organizations and currently has an economic and strategic role as by the efficient use and management of information the organization can get a competitive advantage. This is in fact the vision is really given by document management system: part of an information and communication system, integrating the latest technological advancements in media and telecommunications fields.

Document management solutions

Currently, the main types of document management solutions refer to document libraries and flow applications:

■ Document Libraries

Central elements of a document management system, document libraries include:

- ❖ Project related documents
- ❖ Quality system procedures, quality manual
- ❖ Rules, procedures, regulations which need to be consulted by the staff
- ❖ Internal documents etc.

■ Workflow applications

In an organization the documents are not static. They are created, modified, distributed on clearly defined routes. Therefore, document management systems contain applications that determine precisely where the stream is sent to a document, if it has reached its destination, when it was redirected and which is its status at a time.

Among the workflow applications we mention:

- Information sent from / to the internal system for information / approval.
- Progress report plans.
- Essays, grades, applications, holiday requests, transport requests, procurement requests.
- Generating and publishing policy for quality assurance, human resources policies.
- Submission of documents required for approval of quality system procedures, multiple approvals.
- Malfunction fixing.

Most companies use both traditional and electronic archiving. Depending on the specific workflow activity and on the volume of documents, the archiving problem is identified sooner or later. Electronic archiving in these companies involves either using a document management application, storing documents on the local server or backups on CDs at a time.

Archiving tends to be a problem as companies expand their operations, increase their commercial transactions or after an operation period. Classical archiving documents has the disadvantages of allocation of physical storage space, of the slow subsequent identification and of time consumption to retrieve documents.

Electronic archiving is the process of safely storing the result of the conversion process, generally on an unalterable storage environment type WORM (write-once-read-many) to provide access / opportunities for search-based retrieval in content or in index fields related to the documents.

Workflow automation is a cooperation process among participants involved in running a business process (document processing, review, automatic routing, etc..) for tracking the progress / completion status and implications in eliminating the delays and maximize the productivity.

Data flow analysis in an organization is the identification of document routes, the entry flow, the revocation or approval by superiors and eventually return the document to the person who made the document. These document trails in an organization called workflows or workflow links and they can be represented graphically. Electronic documents will circulate by email between people that are found on the trail of a document.

Advantages of a document management system

A document management system contains easy to use software, very intuitive and well organized, has an integrated electronic messaging for fast and reliable communications within the company and with other organizations or economic agents connected to the Internet and allows:

- document flow on hierarchical routes defined by the author, with the possibility of their approval or rejection;
- standardized creation, distribution and circulation of information and internal company documents, as well as those arising in relation to other organizations, ensuring the highest standards of security and confidentiality;
- tracking the document status in various stages, revealing how those are used. The system allows authorized persons of the company to know any time where a document is and its condition, through the records of the documents;
- ability to quickly get statistics on cases and situations resolved or not.

Compared to the manual systems, the automated document flow has many advantages:

- automatic routing;
- integrated system;
- activities monitoring;
- automatic notification of problems;
- group usage;
- document tracking facilities.

One option for implementing document management solutions is not enough to streamline the business processes. Organizations should adopt a theory first which carries the process. How the documents are handled cannot be the burden of a single department. It is the result of the experience of all stakeholders involved in the organization, together with the laws in the development, distribution and archiving the documents.

The implementation of document management does and will not mean the disappearance of the written document. It is only an effective approach in terms of information flows within the organization and its outside relations. The technological development and the spread of cell phones brought to the community new sources for the deve-

lopment of business documents: as digital assistants or mobile contracts, and represent new areas in the organization information migration. The introduction of digital signature for the Romanian legislation and legal practice has also created the possibility that certain documents be done, delivered, addressed and stored in electronic media, having the legal power of a document.

All these bring new challenges to the organization management which must develop and adapt rules for managing and manipulating capable information in order to create healthy document flows on the one hand, and secondly, to integrate into a coherent system the created documents.

Informatic document management solutions

In Romania there is a large number of dedicated document management solutions, which cover different needs of companies and public institutions. Along the solutions offered by ICT industry leaders worldwide, there is extremely accessible a wide range of applications developed by local software companies. In addition, from the availability of a large number of specialized hardware there can be easily integrated solutions that cover all needs of the organizations, starting with the conversion to digital format and ending with storage solutions and digital document management.

Romanian market experienced a growth of the offer - from simple hardware and software, standardized, allowing easy conversion of text and image in the computer storage and the latter to complex applications, personalized information identifying the type of image content scan, store it in an appropriate database, access, modification and distribution to / by authorized users. From these perspectives we find both multinational companies (Kofax, Scale, HP, Fujitsu Computer, Xerox, etc.) and local firms and developers who build applications „on demand” (GC & GC, Wittmann & Partner, SOBIS , Cybernetics, UTI etc.). Because many documents are currently built electronic and are used in this environment, without, in some cases, being printed, document management tries to find solutions and applications for the manufacturers of EAS (Siveco, TotalSoft, Oracle, SAP, etc.)

IBM solutions

IBM offers solutions for dedicated performance management documents, as there is available also an advanced platform for developing applications. Document Management Solutions from IBM are closely related concept of „business on demand”, with high scalability and opportunity to adjust to changing business requirements. For example, IBM Lotus solutions integrates traditional electronic messaging, collaborative applications available through a simple web browser, e-learning systems or document management solutions. Lotus provides advanced features for collaboration, representing it in a very solid basis for teamwork and increase productivity of the user groups. IBM also offers advanced content management technologies that would satisfy various user requirements.

Microsoft technologies

Microsoft has the advanced technology to develop specialized applications for document management, while providing access to a range of specialized solutions that simplify processes for cooperation and document management. Microsoft SharePoint Portal Server can connect users and teams within organizations, enabling communication and access to information through a web portal. Integrating a cooperation environment, based on this solution, can help to streamline the business processes, leading to improved teamwork and reducing the time to make decisions. SharePoint Portal Server is part of the Microsoft Office System.

Thus, within the 2003 Office suite there are available tools that simplify teamwork and sharing the documents through the portal.

Solutions to follow the document flow

The main document management product that Wittmann & Partner Computer Systems promotes is ConnAct, a solution built on Lotus Notes / Domino Server, which centralizes information from an organization and allows direct access (on levels of access - security) at any important information in the organization, stored and updated. Feasible Wittmann & Partner team contains a number of dedicated modules, through which everyone in the organization leadership may control the workflow from the inside, while ensuring effective control in quality management: Document Management (Document Management), Management Group Work (Workgroup Management) Project Management (Project Management) Workflow Management (Workflow Management) Office Management (Office Management) Quality Management (Quality Management). Editing documents using ConnAct contributes to improving the quality of documents and processes, allowing standardization and quality improvements, according to ISO 9000.

A new approach in document management

The available document management solutions volume is increasing both globally and in relation to the Romanian market, which has grown considerably in recent years. This is primarily due to the widespread awareness of the need to implement such a solution.

WINDREAM Solution developed by Scop Computers provides the organizations a new approach to the integrability of the Windows operating system. WINDREAM is as user friendly as Windows. If other document management solutions run as applications developed and installed over the operating system, WINDREAM first such product is fully integrated into Windows. Patented technology used, VFS (Virtual File System) enables you to manage documents using Windows Explorer without the need for an own interface. Thus, the Scop Computers solution has a higher degree of acceptance from users compared to other document management solutions.

WINDREAM Windows extends the functionality of the operating system with document management. WINDREAM uses Windows technologies and standards and works with all Windows applications and all types of files. Runs on standard database engines: Microsoft SQL Server, Oracle.

WINDREAM has a modular design, scalable to meet different customer needs. Thus, customers can start by installing small pilot projects, then extend the solution for several departments and ultimately the entire organization. Costs of installation, training, consulting, maintenance is lower than for other solutions.

Within an organization, WINDREAM optimizes processes as: staff recruitment, sales, marketing, production, management, financial management, administration, IT.

In the near future, more organizations will implement an electronic document management, as the information system development and competition requires it.

SIVADOC – document management solution

SIVADOC, document management solution from SIVECO Romania, provides the following important advantages:

- Allows centralizing and making available all documents throughout the organization, regardless of their nature of entry into the system (text documents, email messages, faxes, scanned documents, images);
- Is a flexible way to organize documents on a tree structure, organization, similar to a standard file system - drawers, folders and documents;
- Generates documents in standard formats;
- Adapts simple search mechanisms or advanced search at any level of knowledge in computer use and the need to do filtering based on various criteria of complexity;
- Provides mechanisms for printed documents and scan type information extraction Optical Character Recognition (OCR), and to enter into electronic documents using mechanisms of integration with electronic mail systems, faxes management and facilities automatic loading of documents saved in specific directories;
- Provides integration with Microsoft Office applications and integration with the Microsoft Windows environment;
- Enables secure access to any level of deposit documents, whether it is the drawer, file or document;
- Provides reduce storage space by translating documents into electronic archives fund;
- Maintain the safety of archive documents without risking their damage;
- Reflects fairly, with the convenience of administration, the organization and activities, ensuring protection of information both within the organization and externally;
- Works on any of the management of databases known (Oracle, Microsoft SQL Server or IBM DB2). Also for reasons of flexibility, SIVADOC was designed so that it can operate on both Microsoft Windows operating system and the Linux environment;
- Accelerates and increases the efficiency of organizational processes;
- Improves the quality of information processing in the organization;
- Improves the image of the organization through the use of standardized documents, treatment patterns similar problems and compliance with well established rules, maintaining consistency of information exposed by the Web site organization.

- Reduce by at least 30% of paper consumption due to movement and storage of electronic documents between departments or to / from external partners.
- Through the use of electronically signed documents, gives the documents the same legal value as paper documents.

The beneficiaries of these products are both companies whose costs significantly less processing documents, and customers who will benefit from faster and more efficient services.

Romanian market document management solutions will continue to occupy a growing proportion, but it will be necessary examples and case studies to convince potential customers of the need for such investment. Market has not yet reached the maturity necessary to understand the mandatory implementation of document management solutions, and customers have not yet fully identified needs.

Interactions with partners and customers tend to be made in electronic data systems. Legislative projects such as „Electronic Document Archiving Law” and „Temporal Mark Law” warns us about the need to implement electronic document management solutions.

In Romania, the process of adopting document management solutions is rapidly expanding. Already about 10% of large companies use this type of applications, which is less in comparison with EU countries, where the percentage approaches 30%. Changing mindset is important, however, that Romanian managers are becoming aware of the importance of adopting document management solutions and projects. The process is evolving and will experience real growth due to Romania's EU accession in 2007, when the companies were forced to adopt European standards of quality. If this time is a fact that most Romanian companies use databases and archives in the form of paper files, it is equally natural that in the near future they will be transferred electronically in structured databases.

Conclusions

Document management is an area whose potential has not yet been fully explored. Although documents are support for any transaction, whether domestic or business dealings with third parties, we are still loyal to the physical format of the document. The price of this fidelity is the allocation of additional resources without contributing to increased productivity but staff. The volume of documents increase as business grows, the time allocated to identify them and work increases. A global connection through the documents will not necessarily lead to the emergence of „paperless offices”. Technologies that allow us to administer and manage documents without the need to print them, significantly increase the amount of information embedded in documents of a company, this year and could even double. However, new administrative structures, new techniques and strategies will support communication and collaboration for the purpose to increase the efficiency and satisfaction in daily work.

A document management solution offers three key advantages: saving time, space and human resources. With a dynamic business environment and increasing flow of information circulating inside an organization and externally, a powerful document

project and knowledge management primarily affects working time management. Moreover, reducing the paper documents generated substantial reduction in storage space archives.

A product information management is a collaborative computing solution that helps thousands of organizations every day worldwide to improve the degree of innovation and product quality, reduce costs and time to release the products in full compliance with industry standards . To introduce such a solution we start with an audit of organization resources, establish internal and external processes of the organization, observe the flow of information and resources and then implement the solution itself.

The first step that must be taken into account before implementing a document management solution is human resistance to change (successful projects must have the support of management, so employees need to operate centralized).

It was found over time a lack of knowledge in the field, from customers, which typically leads to resistance.

Document management is a critical issue for organizations in Romania. First, the traditional approach of documents consumes much of organizations time and money, which tend to move towards searching for solutions in order to meet more and more specialized requirements. Moreover, this reality requires producers of such solutions to develop more efficient systems.

Applications "Document Management (DM) are purchased and implemented and in order to obtain ISO 9001 certification, or to comply with a number of external organizational requirements.

Organizations in our country align with international trends that promote the efficient management of documents with important environmental implications, but also with economic effects, leading to the congestion and streamline of the processes within an organization.

Ensuring that the resources and their allocation is economically optimized, improving traffic flow of documents, permanently following the routes within the organization and the standardization of communication are just some of the advantages brought by the operation with document management applications.

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The Adoption and Use of Information Systems in Romanian SMEs

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Abstract

Purpose – The paper presents different types of integrated information systems and evaluates the extent to which they are adopted by small and medium sized companies in Romania. The authors analyze the way technology is applied in these companies for increasing the business performance.

Methodology/approach - The research resorted to available case studies as well as statistical data published in journals and newspapers. Additionally, the authors conducted a market research using the online survey.

Findings – Computer utilization rate in Romanian SMEs is high. The IS adoption process is poor on business and technology alignment. The adoption drivers are not strategic, rather they revolve around increasing efficiency, stronger control of the activities and modernization of the business. There is a need for improvement in technical training for employees.

Research limitations/implications – The business industries are not equally represented in the results of the study. Two areas of activities which are services and production are predominant as they cover 75% of the responses to the survey.

Practical implications – The paper serves SMEs managers in considering the objectives of information systems and assessing the technology applicability in their companies. It raises the awareness in regard to pre-adoption business preparation. Also, the results of the study help IS implementers assess their role in information technology adoption in SMEs.

Originality/value – Although information systems have been around for decades, the research literature is scarce with studies that analyzed the actual use of them in SMEs, especially in Romania. The authors work offers a view of the actual degree of IS applicability in Romanian SMEs and reveals managerial issues that impede on best use of the technology.

Key words: information systems, business, management

Introduction

The information technology proved to be the most disruptive of all previous technologies that impacted the business sector. Computers have been introduced in organizations about five decades ago and since then the information technology tools showed a rapid increase in performance and feasibility. Due to its pervasiveness information technology (IT) has marked managerial decision making in all industries and in all aspects ranging from identifying new business opportunities and threats to dealing with operational issues. Integrated information systems like Customer Relationship Management (CRM), Enterprise Resource Planning (ERP) and Supplier Chain Management (SCM) received great attention from business managers starting in 1990s. As companies have always been dependent on transition and processing of data, managing resources and analyzing information, these systems persistently evolved and have continued to appoint significant constituents of business performance.

Types of Information Systems. Description and Roles.

Types of Information systems. Description and roles.

Information systems were initially developed in organizations starting with the simplest software aimed at performing mathematical operations faster and more accu-

rately for financial and accounting functions. In some companies, especially small ones, the computerized support is still limited to this level, although more sophisticated information systems would allow organizations to obtain more diverse advantages and new capabilities.

Examples of largely used advanced information systems in business are Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), and Supply Chain Management (SCM).

(a) An Enterprise Resource Planning is a software system comprising several software modules aimed at integrating all business functions in a single computer system that can serve all different departments' particular needs. Thanks to the use of the same database, various groups within the enterprise can easily share information and communicate with each other.

Koch and Waligum (2008a) describe five business objectives pursued through the adoption of ERP systems:

1. Integration of financial information—offering the CEO a better understanding of the company's overall performance by unifying the information residing in different departments (finance, sales and others) and generating a single interpretation of financial performance.
2. Integration of customer order information—ERP holds the whole information about customer orders in all stages in the enterprise, from entry to invoice dispatch. Having customer order information in one system confers companies the advantage of keeping track of orders easier and facilitates the coordination of manufacturing processes, inventory and shipping.
3. Standardization of manufacturing processes - ERP systems introduces standard methods for all business units for automating some of the steps of a manufacturing process. The standardization saves company time, increases productivity and reduces head count.
4. Reduction of inventories—By smoothing the flow of manufacturing process and improving visibility of the order fulfillment process inside the company, ERP contributes to reducing inventories of raw materials and helps employees plan deliveries to customers better.
5. Standardizing HR information—ERP offers a unified, simple method for tracking employees' time and communicating with them about benefits and services.

Initially, ERP systems were best suited for manufacturing companies that produced discrete goods, leaving aside many industries centered on process manufacturing. Later on, the ERP vendors started offering customized application sets to respond to each vertical segment's needs. Currently, ERP applications target more industries such as retail, media, utilities, high-tech, public sector, higher education and banking.

(b) Patton and Wailgum (2007) enhance the essence of the CRM technology by stating: „Good customer relationships are at the heart of business success.” They prefer to use the term Customer Relationship Management (CRM) rather as a strategy than a technology. They indicate that CRM's objective is to learn more about customers' needs and behaviors in order to develop stronger relationships with them. The CRM technology is about collecting and processing information on customers. This strate-

gy depends on bringing together many pieces of information about customers and market trends so that the selling process and the marketing services becomes more effective.

The central role of CRM is to contribute to:

- Identifying services and products desired by customers
- Offering better customer service
- Cross selling products more effectively
- Helping sales people closing deals faster
- Retaining existing customers and discovering new ones.

(c) Supply chain management (SCM) is the information system designed to improve the way company finds the raw components needed to assemble a product or to develop a service, and deliver them to customers. Wailgum and Worthen (2008) believe this is the most fractured group of software applications among integrated information systems. They identify the basic components of a SCM system:

1. The planning module, which is the strategic part of SCM, consists in developing a set of metrics to monitor the supply chain in order to maintain or increase its efficiency, keep the costs under a certain threshold and deliver high quality and value to customers.
2. Sourcing module: In order for companies to select suppliers, supply chain managers must develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships. Processes are brought together for managing goods and services inventory, including receiving and verifying shipments, authorizing supplier payments and transferring the materials to the manufacturing facilities.
3. The manufacturing component: SCM managers schedule the activities necessary for production, testing, packaging and preparation for delivery. Thanks to this step in SCM, process companies are able to measure quality levels, production output and productivity.
4. The delivery component is referred to as logistics, where companies coordinate the receipt of orders from customers, develop the warehouses, pick carriers to get products to customers and set up an invoicing system to receive payments.
5. Returned products component - Supply chain planners have to create a responsive and flexible network for receiving defective or excess products back from their customers and supporting customers who invoke issues regarding delivered products.

In the absence of interconnections with other companies' SCM systems, the main role of supply chain software in an enterprise is limited to improving the ability to predict demand from customers. Networking capabilities of information technology allow companies to connect their supply chain with the supply chains of their suppliers and customers in a single network that optimizes costs and opportunities for everyone involved. However, sharing supply chain information and obtaining system flexibility represents a higher goal still to be achieved in most of the vertical business segments. Dominant industry players may compel their suppliers to adhere to their data-exchange standards and share supply chain information. Timely and accurate supply

chain information confers the ability to manufacture and ship only as much of a product as is required by the market.

Briefly, SCM can bring the following business benefits:

- Reduction of planning cycles
- Reduction of delivery times
- Reduction of production times
- Lower stock levels
- Reduction of late deliveries
- Increase in productivity.

In spite of the strong potential to induce organizational change and to leverage the business performance, the adoption and use of information systems is generally hindered by inadequate management approach.

Managerial Considerations in Adopting Information Systems

From promises to realities, information systems travel a long and sinuous path. The designs and demos presented by the IT vendors are simply impressive for decision makers in companies; they demonstrate all the potential benefits of using the information systems: from operational efficiency to simplification and streamlining of processes, and to instantly accessing strategic corporate data. But, just as in business history of all times, regardless of the technology involved managerial skills play the essential role in transforming potential in reality.

Information systems are characterized by fast development and frequent investment requirements. This dynamism requires flexible IT infrastructures. The last decade of technological development brought about important changes in all components of IT architecture: public network infrastructure, operating systems, and data base management and enterprise solutions. Except for the software applications, there is a convergence tendency in adopting standards for the production of infrastructural components.

Software applications are under continuous change, being constantly redefined by two types of requirements: the strategic business context and technological evolutions. Usually, adjustments in business processes involve updates or replacement of the current applications. Even if the modifications are independent of the platform in use, time and costs implications for implementing the required transition depend on the degree of infrastructure flexibility. Business process innovation can be hindered by rigid technological systems.

A company, especially a small one, may be sheltered from the risks implied by a rigid technological platform since they generally use independent small applications that are easy to handle. Yet it is impossible for them to get the level of business agility and the advantages fostered by the use of integrated information systems. While describing the ERP systems, Koch and Wailgum (2008b) illustrate the example of a customer order received by the company. The order travels, as information, sequentially from one function to another. Where there is no integrated system, the information is coded and de-coded at each step and transposed on paper to be handed over to the next department. Such a fragmented process entails delays and errors for

large amounts of data. Business growth impose a leaner flow of information and faster and better control of the company's assets. Thus, the organization turns to adopting an enterprise wide software system. Once an integrated system is in place, passing information from one company function to the other becomes an automated procedure. The system redirects the reports produced in one department to the next department, so the information flow in the company is streamlined.

Technically, the transformation is worth it. However, one of the most important aspect to consider when adopting an information system is the human resource component. People need to learn how to use the system and most often, they need to change their way of working. Additionally, since the system grants visibility to all users over the whole information flow, the responsibility of employees does not resume, as before the integration, to their own area of activity. For example, the customer service representative is no longer a simple typist that enters the client data into the computer. Because they have access to: the customer's credit rating and order history from the finance module, the company's inventory levels from the warehouse module and the shipping schedule from the logistics module, customer service representatives are able to decide whether and under what conditions the order will be fulfilled (Koch and Wailgum, 2008c).

Consisting of a modular structure, the information systems, especially ERPs, can be acquired one module at a time. This investing approach confers spending flexibility and less disruptive organizational change. On the other hand, it deprives companies of complete functionality and induces work redundancies as the information flow is hindered by missing modules. Enterprise-wide systems entail certain risks. There is empirical evidence of the dangers inherent in such large projects.

Koch (2008) and other business analysts magnify the need for companies to determine if their ways of doing business matches the requirements of the standard ERP package. When misfits are identified and a company still decides to contract development of the information system, there are mainly two approaches that can yield positive results:

- Customizing the software to the particularities of the company, which usually slows down the project, may introduces dangerous defects in the software and increases the difficulty of system upgrade since customizations will need to be considered separately and revised to keep up with the new software version.
- The other approach is to consider altering the business processes to accommodate the software. This forced fit of the business to the requirements of the software system could prove dangerous for the business profitability as long-established ways of doing business are often the source of the competitive advantage. This approach of technology adoption destabilizes people's roles and responsibilities.

Analyzing the relationship between IT infrastructure flexibility and organizational change, Prahalad and Krishnan (2002) observed that as they grow, companies deploy information systems with no anticipation of frequent changes. Old systems become too rigid to support innovation or even to contribute in some cases to operational efficiency. Pursuing data consistency and increased business processes efficiency, companies deploy large, enterprise level, information systems. The authors o general tendency of business managers to ignore possible misalignments of the in-

formation system with business strategy. Even though some modules could be customized to customer request, this doesn't diminish the latent problems, but instead raises the cost of implementation and leads to a certain dependency on the supplier when new functionalities are needed. The implementation of extended pre-developed systems (not tailored to particular businesses) causes a lower flexibility of the information infrastructure. An inadequate strategic approach of the adoption may bring information systems to a point where they lock the business in a rigid technological framework. Business managers must ensure that the integrated application package purchased by the organization does not steamroll existing practices, when they are the product of years of learning and just cannot be improved upon (Adam and Sammon, 2004a).

The need to deploy a CRM information system surfaces when the organization lacks an accurate view of customers and their needs in the present and future. Analysts advise developing a customer-centric strategy before considering the investment in CRM. Company needs to decide prior to implementation what customer data are to be collected and stored in the system since storing useless data is expensive and time consuming. At the same time, system implementers should keep in mind that data can enter the system through various ports of the organization that interact with the customer: front office, point of sales, customer service, phone, email, websites and so on.

The Business Environment for Romanian SMEs. Premises for IC&T Adoption

According to the studies of Adam and Sammon (2004b) the major concerns of SMEs managers regarding ERP adoption resides in the perception that ERP implementation takes a lot of time and is best suited for large organizations. Actually, in terms of the size and complexity requirements of the software, information systems are more accessible to SME's by comparison with large enterprises. The implementation process of integrated systems such as ERP software is easier and less time consuming. The authors consider that software implementers play a key role, not only from the technical perspective, but also in managerial and political terms by helping SMEs managers adjust their expectations and avoid misconceptions. Most of the companies planning to adopt information systems take into account the recommendations and assistance of IT consultants and specialists.

The studies published by UN Procurement Division¹ enhance the role of governments in addressing the concerns of SMEs about adopting information and communication technologies (IT&Cs). The study indicates that the main factors that hinder or discourage SMEs from fully realizing the benefits of IC&Ts are the lack of knowledge, resources and trust and proposes ways in which the government can encourage SME access to and use of information technology. Among the key policy directions mentioned are: proper business environment, network infrastructure and broadband deployment, regulatory trust, human capital development and skills enhancement, dissemination of information and others.

- Business environment

Relative to the Romanian business environment, a market research released in 2009 reveals that medium-sized entrepreneurs consider the last year to have been "Ro-

mania's darkest economic year" (Radio Romania International, 2010). At the same time, the National Council of SMEs in Romania (2009) indicates in its report on the second semester of 2009 that the business environment index (ranging between -87 and +70) is -4, value that reflects a very unsatisfactory evolution of the Romanian business environment for small and medium sized enterprises. The index is calculated based on 13 indicators among which: the actual pace of GDP growth, unemployment, taxation on labor dynamics, taxation of income tax, exchange rate stability and others. Comparing the second half of 2009 with the same period of the previous year, the report indicates that the number of new entrants in the SME sector decreased by 19.8% while the number of deregistration increased by 58%, respectively. The number of profitable SMEs decreased by 3-6%, SMEs debt increased by 5.8%, average turnover per SME dropped by 13%, average income per SME decreased by 7% , average number of employees per SME decreased by 16% and SMEs' investments diminished by 8.5%.

- Broadband penetration

Statistical data presented by the European Commission² indicate that the fixed broadband penetration rate in Romania, although steadily increasing, is one of the lowest in the EU (11.7% in January 2009 from 9% in January 2008). Yet a recent communiqué from the Ministry of Communication and Information Technology reveals the intention to redirect a large portion of European funds targeted at developing broadband networks towards the e-Romania project, which aims at interconnecting all IT systems of the government (Seceleanu, 2010).

Although the Internet penetration is low, the average connection speed of existing Internet connections in Romania is impressive, ranking 4th place in the world, according to an Akamai report for the 4th Quarter 2009³.

Adoption and Use of Information Systems by Romanian SMEs. Market Research.

In order to assess the adoption and use of the information systems by Romanian SMEs, the authors conducted a market survey. An online questionnaire was distributed to SMEs in the whole country and 440 answers were received.

Most of the companies that responded to the questionnaire are in the services industry (39%) and production sector (36%), followed by distribution and retail. By the number of employees, 20% of the companies involved in the study are microenterprises (under 9 employees), 46% of the companies are small (between 10 and 49 employees), 25% are medium (50 to 149 employees) and 7% have up to 250 employees. Most of the respondents (85%) are managers.

More than half of the employees in 46% of the companies operate on computers. In spite of this high computer utilization rate, the level of using advanced technology is lower. Most of the companies are using separate software applications (59%) and not an integrated software. 19% of the respondents use only editing software, like office assistants, and 40% own applications for business activities.

The next items in the questionnaire refer to distinct functions of the IS.

1. Companies with no integrated information systems:

The cost of implementing integrated systems is the main reason (52%) invoked by companies for not using an information system. Another motive against implementing integrated systems is the comfort of using current applications (41%). 23% of the companies accuse the shortage of human resource skills for not adopting integrated systems.

However, the survey results show encouraging evidence of higher rates of IS adoption. 30% of non IS users are planning to adopt information systems within the next year, and the motivation for doing so is primarily efficiency improvement and gaining better control of the company's activities. In addition, company renewal considerations are playing a significant role in the decision to invest in technology. Modernization is considered very important by 42% of the respondents while 45% think it is essential. Gaining long-term competitive advantage is viewed as very important by 52% of respondents, and as an essential driver of adopting information systems by only 31%.

Other objectives pursued by IS projects are solving immediate business needs (considered essential by 39%), and the ability to respond to business opportunities (significant for 27%).

2. Companies that use integrated information systems:

Respondents were asked to rate the significance of several characteristics of an information system. 51% of the respondents believe that it must be approved by the company's accountants and other 35% consider this criteria to be important.

The flexibility and scalability of the technology are rated as very important by 42% of the respondent and important by 51%, respectively. The contribution to the competitive advantage is also highly rated as 46% of respondents regard it as very important and 47% think is important. As far as the ability to connect the company's information system with those of the collaborators is concerned, 18% of the respondents appreciate it as a very important, while 31% think it is important.

Because of misalignments between acquired IS and business structure, processes and strategies, it may happen that part of the system's modules get to be owned by companies without being used at all. As for Romanian SMEs, 26% of the companies are using less than 50% of the acquired modules, while only 37% utilize the whole systems.

Among the explanations advanced for this situation, the most common one is lack of fit between IS and the business (55%). Additionally, 50% of the respondents articulate that business does not demand for all the existing modules. People did not accommodate to the information system in 29% of the companies. When inquired about the plans of replacing the current information system, most of the respondents invoked companies' budgets and the effort required for change as main obstacles to a possible system replacement. 34% consider price of the IS as the critical barrier to such a change and 63% state it is relevant. 32% of the respondents rate the change effort as critical and 50% appreciate it as relevant.

Regarding the selection of the IT vendor, most of the criteria (60%) are geared to the recommendations of IT specialists. 55% of the companies pursue market analysis, 49% take into account current users recommendations, and 41% expect the vendor to offer software customizations.

Generally, the companies that use information systems face more or less important difficulties. Our survey indicates that 52% of the respondents signal operating errors made by employees. For 11% this issue is a serious problem, for 47% it has a significant impact on business performance, while for 42% it has a reduced relevance to the business progress. 32% of the respondents complain of system rigidity in correcting errors, 28% experience network connection interruptions and 20% of the companies mention poor human resource skills.

16% of those who use information systems intend to replace them within the next year.

Operational efficiency is the most sought after benefit of adopting information systems. 66% of the respondents believe this is essential and 28% consider it important. Satisfying immediate business needs is very important for 45% and important for 40% of respondents. A better market positioning is a very important IS objective for 33% and important for 35%. As it is the case with companies that do not use an information system, companies that have information systems give business modernization a very high importance. 56% of the respondents admit this is an essential purpose for introducing IS in their business, and 32% mark it as important. Less attention is given to innovation growth. The role of encouraging innovation is considered as essential by 39% of the respondents and important by only 28%.

In some organizations, especially novices in the IS use, there is some redundancy in the activities performed by employees: on one hand, they record the information on paper or in the old system, after which they enter it in the new system. Yet, 93% of the respondents trust that information technology simplifies the execution of tasks in their organizations.

Conclusions and Discussions

Computer utilization rate is quite high in Romanian SMEs, but most of the companies do not benefit from software integration as they still use dispersed applications. The current business environment and the significant reduction in average turnover per SME (13%) could be the responsible factors for the situation as most of the non adopters consider the price of the systems as discouraging.

The IS adoption drivers are not strategic, rather they revolve around increasing efficiency, stronger control of the activities and modernization of the business.

The critical role attributed by the respondents to accountants in the process of selecting the information system suggests that SMEs use IS mostly for operational purposes and too little strategically.

The interconnecting capabilities of the technology with business partners in the industry and along the supply chain are not among the most pursued objectives of Romanian SME's, but still some of the companies pay attention to this aspect (18% of the companies consider it important to use the same IS as the systems of their partners).

The relatively high fraction of companies that use their systems inadequately (26% use less than 50%) raise worries with respect to the perception on information systems in SMEs. These companies may be trapped in misconceptions relative to adopting information systems, being dominated by what they perceive to be the high price and discouragingly great effort required to replace existing systems. Obviously, running current systems turned unprofitable since SMEs use less than 50% of the modules of the software packages. IS vendors play an important role in replacing systems. Vendors can identify companies that can benefit from the change and can contribute to improving the demands expressed by customers and the post-implementation usage of systems.

Although for large companies customizations imply time consuming analysis and costly code writing, and slow down the system upgrades, in the case of SMEs customizing could prove to be a feasible approach for creating a fit between business strategy and the IS framework. Unlike in the case of large companies, this approach for aligning business with the IT could prove to be more adequate and less perturbing than the alternative which often implies fundamental changes to established business processes.

Simultaneously with pursuing a better alignment of the IS with the business processes and the ways people work, the survey reveals the need for better employee training as 52% of the surveyed companies mentioned employee operating errors among the challenges to information system utilization.

The survey results indicate a tendency towards responding to short term business needs both in companies that adopted information systems and in companies that still use non-integrated applications.

Notes

¹ APDIP e-Note 12 / 2007, "The Role of Governments in Promoting ICT Access and Use by SMEs

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² European Commission Report

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Modelling and Simulation of Production Systems

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Abstract

Purpose – The main objective of this work is to analyze and highlight how to work the production system. Through this work are highlighted various "states" of the production system and proposed solutions for solving these "states" which can occur at any time in the production system.

Methodology/approach – The methodology used in analysis for production systems is a very simple and extremely effective in achieving that goal. The authors analyzed the system and each event brought many a question, then tried to give an answer.

Findings – Through case studies discussed in this paper, the authors want to highlight the techniques, tools and methods for solving certain types of problems that may arise in the study of production systems.

Research limitations/implications – The authors wish to emphasize the advantage that it provides tools and a method used in this work but warns that if these tools and methods are used by professionals or knowledgeable in the field, results will be very weak or null.

Practical implications - These tools and methods presented in this paper are general. They must be customized for each production system analysis

Originality/value – This paper highlights a different concept of production systems approach by the three case studies presented in the paper and offered solutions to solve each case.

Key words: Modeling, Simulation, Optimization.

1. Introduction

The system is a set of elements which interact and are interrelated with each other, with the aim to achieve an objective.

At a first examination of the system within it can highlight the following:

- *Inputs* - including human resources, material resources, information resources, equipment, financial resources, etc.
- *Transformation* - implementation processes.
- *Outputs* - products, informed decisions, etc.

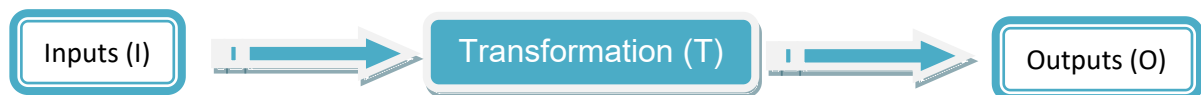


Fig.1. Simplified representation of a production system

In this paper we focused on the production system.

Production system is a complex combination of elements which has as inputs: material resources, human resources, equipment, finances, information, buildings, technical facilities (facilities for renewable energy, water, air, etc.), technologies, and other resources deployed and the finality of the process resulting products.

2. Case Study

Analyzing the production system in terms of system components, listed above, you can highlight three types of problems that may arise.

2.1 Case 1

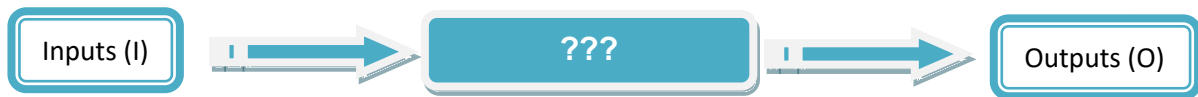


Fig. 2. The case when we need to apply mathematical modeling in production system

Question: What can we use to solve this problem? *Answer:* With MODELING

Modeling is a research tool and is aimed at displaying the real situation simplified, allowing a better understanding of the processes.

One can say that "*model*" is a true representation of reality and at the same time is a simplified representation of reality as to offer effective solutions. It must provide an intuitive, rigorous, logical structure for the purposes of process modeling, and to discover links difficult to establish legitimate and otherwise.

Depending on the type of data used in the production models for production systems, these models can be divided into *deterministic* and *probabilistic* or *stochastic* models.

Deterministic models are models whose inputs are assumed to be known with certainty. For example, the programming models for activities in order to make a product. Because all the material resources used in the product are known, all human resources involved in achieving the product, the time of the activities in every stage and the place where each activity is carried.

Deterministic models are generally used to allocate the works to different workstations, programming in time to the activities, etc. A deterministic model will always provide the same *solution*, for the same set of input data, which are known with certainty.

Using deterministic models is justified by the following statements:

- multitude of important management activity that can be made with these models;
- most deterministic models can be solved analytically, based on mathematical formulas or using algorithms optimization in report with criteria of performance set, and the results are optimal values of variables of decision;
- for solving deterministic models there are software programs to do this, for example, programs that use linear programming models, models for optimizing stock, etc.;
- the prolonged use of deterministic models can help users to develop the ability to formulate general models.

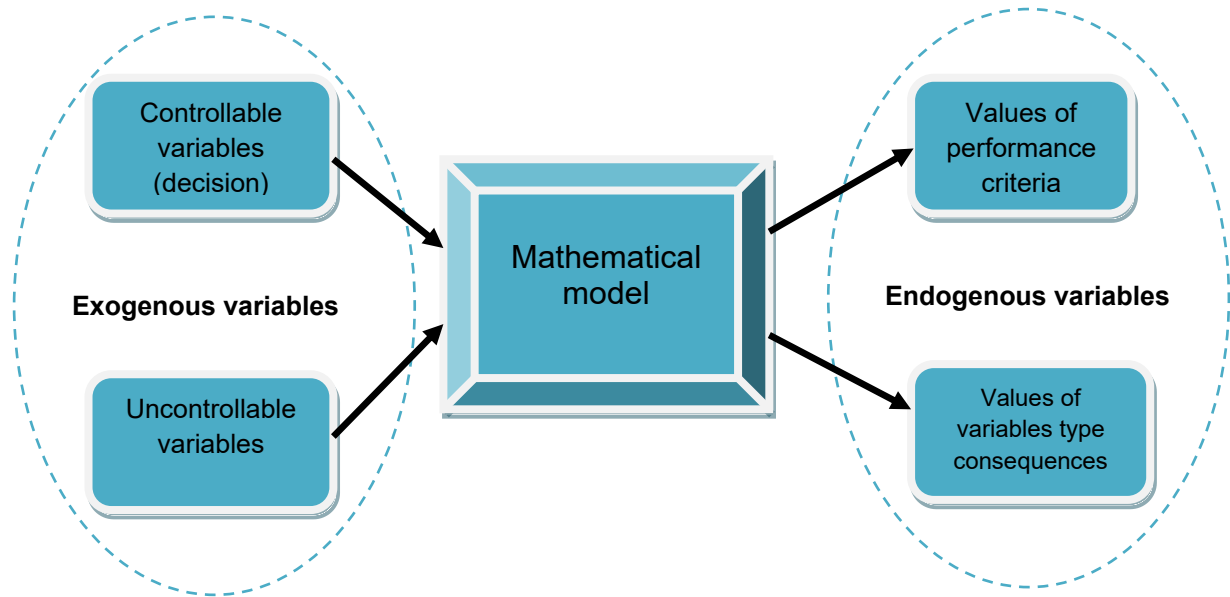


Fig. 3. Graphic representation of a mathematical model

Probabilistic or stochastic models - are models whose inputs are not known with certainty. Variability of input can be described using a mathematical function or a table containing the probabilities associated variable input.

Most probabilistic models cannot be solved analytically and in these situations should be used simulations. For some classes of probabilistic models (based on a number of simplifying assumptions) solutions can be obtained by analytical methods.

Models can be classified according to the type of system it represents. In a model, system status can be defined by the state variables, which can be of deterministic or probabilistic nature. State variables can describe a system in any moment of its operation.

Classified by importance of the function of time in the process analysis, the models can be static or dynamic.

Static model is that pattern, where the variables are not indexed temporal or when the variables are define time-independent. In this model there is no relationship "over time intervals" between its variables.

Dynamic model - is that pattern, where the variables are dependent of time and connected by relations "over time intervals". We assume the time dependence of a variable compared to another variable, considered at another point of time. In reality, all systems are dynamic.

2.2 Case 2

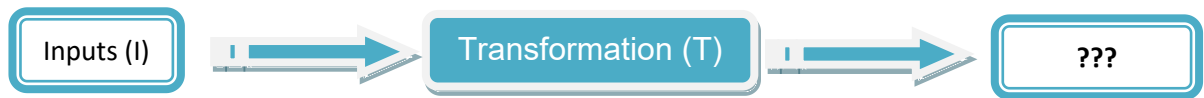


Fig. 4. The Case When We Need to Applied a Simulation in The Production System

Question: What can we use to solve this problem? *Answer:* With SIMULATION

Simulation is the act of reproduction in a simplified version, artificially and in a controlled process, which occurs in the production system. In essence it is an analogy to a real situation, based on technical, allowing a complex study using mathematical modeling.

At simulations basis is the concept a model. This model should reflect reality, and reality will inevitably involve variables and elements probabilistic. These simulations are known as the Monte Carlo simulation.

Advantages of simulation:

- by creating and experimenting the models we can systematically gather conclusive information which often are suggestive
- by simulation we can highlight those variables that have an important significance in the simulated model;
- using simulation we can check whether a solution obtained analytically is safe or not
- a simulation is much cheaper and faster than a simulation conducted on a real production system;
- production systems that have a long period to achieve the objective, can be easily studied using simulations, because the simulation allows control of the time, achieving a simulation can be performed in minutes
- the simulation allows the interruption of the process whenever needed for analysis without the influence of simulation results

2.3 Case 3

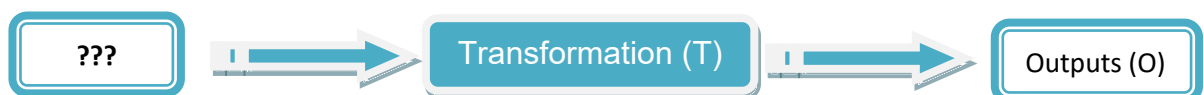


Fig. 5. The Case When We Need to Apply Optimization in Production System

Question: What can we use to solve this problem? *Answer:* With OPTIMIZATION

Optimizing production systems aims to find those solutions that ensure their efficient functioning according to objectives (profit maximization, minimize costs, maximize productivity, etc.).

Optimization consists of choosing and application the best of several possible solutions (existing).

The obtaining of the best solution for a production system is realized with the help of simulations by running more times the programs that contain the models and by the intervention of the operator over the input variables in the system. These variables are: material resources, utilities, financial resources, human resources, informational resources

Nowadays the simulation process is very to make because computers and software's allow this with the minimum of effort and costs for the beneficiary

With the help of optimizations we can obtain the proposed product quantities by using the minimum quantities of material, financial, utilities and personnel resources. Also these optimizations allow the determination of the loading degree of the utilities and the usage degree of each resource in the system.

3. Solving Methodology

3.1 The process modeling methodology

The defining the problem - is realized by taking into account the structure of the production system that they represent and require the following specifications

- a) To develop questions that can be answered by the model (questions about links, constraints, the way they are produce, how is realized and manifests the studied process).
- b) The delimitation of process and the observation of his behavior and interactions between them, in order to understand their operation and how they can be controlled.
- c) The identification of parameters and variables of major interest.

Preliminary design formulation - is the stage when the necessary assumptions are building and they represent a study process, and formulation of preliminary conclusions that they mark out the nature of relationships between variables.

Empirical data collection - presumes identifying and collecting of relevant necessary data, to estimate parameters and restrictions.

Preliminary testing of the model - is the process of testing model based on raw data collected and can involve changes or rewrites of the model.

Additional testing of the model - is carried out according specific procedures of the process and collecting new they data to obtain predictions on the studied process.

Acceptance or reflection of the model - involves comparing predictions model by existing empirical data to validate or invalidate the model that is developed.

3.2 The process simulation methodology

Define the problem – in this stage it should be described clearly, accurately and effectively into words the input variables and parameters that are taken into account to achieve the desired results.

Formulation of the model - consists in mentioning the same type elements that their aggregation to simplify the optimal criteria's and to mention the realizing procedures.

Building the logical scheme - involves the relationships and constraints between elements within the simulation.

Determination of input elements – establishing the input elements of the model

Creating the model simulation program - to realize the model simulation program

Testing the model – involves testing the model by changing the input variables

Evaluation of simulated model - consists in comparing the results obtained from simulation with results analytical or practical.

3.3 Methodology optimization process

Analysis – consists in describing the initial or current state processes taking place in the production system, in terms of objectives, identifying activities and participants in the process, the logic and flow information of the process.

Implementation - in this phase we start from the state “of how the system must show” and we add the implementation details to bring our process in a executable form for the production environment.

Execution - in this stage are synchronized / modify all the process running in the system production according to established technical implementation details to the previous stage.

Monitoring – this step is closely related to the previous stage and consists of collecting information which is automatically taken and analyzed in a short time along with settings. Data is transmitted again in the analysis phase to determine if the process achieved goals otherwise; the process is remodeled, thereby allowing optimization.

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Enterprise Resource Planning and Business Intelligence, Advanced Management Methods for Romanian Companies

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Abstract

Purpose – *The aim of the paper is to study the use of the advanced management methods in the 2010 year in Romania. The study set sights on Romanian organizations which implemented a Siveco ERP and BI software.*

Methodology/approach - *The methodology used is both quantitative and qualitative. The research results were obtained with the use of a questionnaire, and our purpose was to demonstrate some hypothesis concerning the size of the organisation, the management method and the IT&C based decision. The questionnaire was operated with SPSS 17, through a linear regression analysis and a t test.*

Research limitations/implications – *The study is limited to the Siveco companies portfolio and deals with the dependence between existing computers, software programs and the level of business software implementation in every business function or department of 14 Romanian organizations.*

Practical implications – *The practical value of this study was to test die impacts of contingency factors, including size, on die one hand, and ERP systems success, on the other. We try to demonstrate that the relationship between firm size and ERP success will be moderated by IT assets.*

Originality/value – *The research has revealed the global IT and specific ERP and BI implementing level, as advanced management methods, in the 2010 Romanian organizations, and has a high level of originality, such a study has been never conducted before for computer based advanced management methods implementation.*

Key words: *Enterprise Resource Planning, Business Intelligence, Management Methods*

Introduction

The paper is structured on three chapters where the expansion of the use of advanced managerial systems, methods and techniques would represent the main axis of the paper. In the first chapter we presented an overview of the main managerial systems which are successfully used in Romanian organisations and a few specific management methods and techniques, which solve the specific problems, and are not involved in solving some general problems. The second chapter is focused on the advanced management methods, methods which are proposed to be used by Romanian managers. In the last chapter we have made a research based on a questionnaire, that involved 14 Romanian organizations wich use IT management methods, and we have demonstrated some hyphotesys concerning the size of the organisation, the management method and the IT&C based decision.

The success and competitiveness of an organization is determined to a great extent by the management quality and especially by the organizational, decisive, informational and last but not least by the methodical-methodological subsystems. The methodical-methodological subsystem involves the implementation of some efficient methods, tools and techniques which help to diagnose the activity of the organization and the elaboration of an adequate development strategy. An efficient management means well-prepared managers and managers who are familiar with the latest management methods.

We are in the middle of an economic-financial crisis and I would say that Romania is affected more due to the defective management of some leaders than to the crisis. In

a country where we ask ourselves if we have more pensioners than employees or if the wages of the public employees are higher than those of the employees from the private or manufacturing or services field, we certainly have to change essential things. One of the ways of doing this is to use some advanced management methods in the Romanian organizations.

General and Specific Management Systems and Methods

From a managerial point of view an organization can be approached through many categories of methodological, informational, organizational, motivational and psychosociological elements, between which there are relations which give the (management) system functionality. Methodologically speaking, the organization and its management are approached through the managerial tools used in the management processes and methodological elements (methodologies) of projecting, re-projecting and maintaining the functionality of management and of its subsystems. The management method is the way in which managers exert their influence on the factors with the help of a coherent tools system, in order to attain the preset objectives.

The possibilities and the limits of the management methods are determined both by the level of mathematics, cybernetics and computing technique (at that moment) and on the other hand by the development degree of the social and human sciences. Therefore other conditions and information can be added: if not all, then at least most of the managers from a given organization have to know the specific techniques, procedures and methods which are organically connected in the management system; the periodical review according to requirements and needs, because any method after it is applied tends to have a mechanical character. One can doubt the usefulness or the idea of existence/emergence of more efficient methods, leading to the needs of exploring the future in order to avoid the unpreparedness towards the future changes.

Advanced Methods Management used in the Romanian Organizations

Enterprise Resource Planning

Integrated information systems worldwide known as Enterprise Resource Planning represent a tool which integrate the economic processes of an organization and optimize its resources. Enterprise Resource Planning (ERP) represent a systems based on the architecture client/server developed to process transactions and facilitate the integration of all processes starting with the planning and development stage and reaching to the relations with the suppliers, customers and other partners.

For the Romanian organizational environments which entered the game of integration, the implementation of the application packages for enterprises (Enterprise Resource Planning - ERP) means performance, efficiency and control of business. The current ERP systems perform the integration of all management functions of an organization, starting from planning, providing the stock of raw materials, defining the technologies, coordinating the production processes and last but not least, perform-

ing the financial-accounting management, the human resources, end products stock management and developing and maintaining the customers relations and the relations with the business partners.

Business Intelligence

Being one of the favorite themes of economics and management, economic intelligence or Business Intelligence as the Anglo-Saxons call it, has not yet been integrated in the organizational practices or institutional practices from Romania only with a certain timidity and discretion. There are many explanations; some are coming from the professional and competences area of such an activity other significant ones form the cultural specificity. Before starting to analyze some of the problems related to the Romanian economic intelligence we have to point out some of the most relevant aspects of this profession, job and activity from the enterprise or organizational, regional, local or national institution.

Business intelligence is a concept which refers to the way in which decision can be made faster and easier. In the current society the companies collect huge quantities of data daily: information about orders, inventories, and transactions from work sites and of course information about customers. Companies also collect data as demographic data and email lists from external sources. Unfortunately more than 93% of the data are not used in the decision making process.

Balanced ScoreCard as a Decision Support System

In the category of managerial tools used to put the management processes into practice, the Balanced ScoreCard (BSC), is one of the methods which every manager should have, irrespective of his hierarchy in the organization. The BSC represents the total number of current information displayed in a synoptic, preset form referring to the main results of the activities and the main factors which condition their efficient development. The BSC regroups and presents under a selective form the significant indicators also called key points or signals, which enhance the responsible of the assembly or of some part of the organization to control his own field of responsibility.

Research Over the Use of Advanced Management Methods in Romanian Organizations

In the virtue of the questionnaire we achieved the results and we were able to formulate and validate hypothesis. Thus we formulated a hypothesis that in the private domain there is a more efficient usage of money than in the public domain and we have reached the conclusion that providing with excessive hardware is not necessarily a useful thing to do, if that hardware is not correlated with the software applications.

Another objective of this study was to test die impacts of contingency factors, including size, on die one hand, and ERP systems success, on the other. We demonstrate

that there would be a relationship between firm size and ERP success; the relationship between firm size and ERP success will be moderated by IT assets, such that success will be higher in larger firms and that the relationship between firm size and ERP success will be moderated by IT resources, such that success will be higher in larger firms. We concentrated on public organizations because we believe the adoption of ERP systems might be higher there than in private sector organizations. We analyzed our data using SPSS 17.0, and our respective response rates, excluding the unusable questionnaires received, was 14 organizations.

We also used statistical techniques in order to define the differences between the groups, using t test. In order to analyze the statistical connections we used correlation analysis for the intensity of the connections between the variables and regression analysis to estimate the value of a dependent variable (effect) taking into account the values of other independent variables (causes). We carried out a multiple regression analysis in order to identify the effect that the number of employees, the number of de computers as well as the number of computers interconnected in a network has upon the software devices materialized under the form of computers on which an ERP, BI or BSC application is running. Thus there was validated the hypothesis referring to the better efficiency of investing money in the private domain, and also a better correlation between the efficiency of the hardware and employee resources and the implementation of a ERP, BI and BSC in the private domain in comparison to the public one.

Methodology

Questionnaire, the research instrument

The study set sights on Romanian organizations which implemented a Siveco ERP and BI software, and were collected in 2010 year. The instruments used for collecting data were a quantitative questionnaire, an qualitative one and an interview. The research based on the quantitative questionnaire was structured on 27 questions focused on hardware and software endowment (8 questions), implementation of the ERP business software for five business function such as manufacturing, SCM, financial, HRM and CRM (6 questions), other 6 questions were dedicated only to Human Resource Management function and the last 7 questions were dedicated to BI management methods.

Respondents

Even data were collected only from 14 organizations, these are representative for the 2010 Romanian economy, because in this economical moment Romania has only 5,000 companies that need an ERP and a BI software instrument as a advanced management method. So we have only 2,000 big companies having more than 250 employees which can afford to implement a SAP, Oracle or Siveco ERP software. But these 2,000 companies generate incomes two times higher than the other 10,000 SMB, and equal those of the 500,000 small Romanian companies, that have under 50 employees. From these 2,000 big organizations most of them are branches from transnational companies, and have mostly implemented ERP existing in their main organization, usually SAP or Oracle. So, are likely to be investigated public organiza-

tions and private Romanian capital organizations. These two categories have a hundred percent Romanian management, and had to optimize it.

Results

Research Hypothesis

H₀₁ The number of employees in an organization influences the role of the ERP applications within the respective organizations. The organization dimension is directly connected with the role of the ERP applications within the respective organization.

H₀₂ The implementation of the ERP applications in all the organizations departments leads to the transformation of IT into a strategic organization resource.

Testing the Hypothesis

For H₀₁

We used regression analysis, as a statistical method to evaluate the relation between one independent variable (personal - size of organization) and another continuous dependent variable (ERP_BI given to the ERP and BI level of implementation). With this analysis tool we have performed a linear regression analysis using the method of the least square in order to plot a line by a set of observations. Thus we have performed the analysis of the dependence and we have appreciated the extent to which the independent variable influence the dependent. With linear regression we output the regression coefficients necessary to predict one variable ERP_BI from the other personal. The model has been confirmed to be valid because the F test value were 49,35, with significant sig. <0,05 (0,02). The regression coefficient R=0,980 shows a very strong link between the variable ERP_BI given to the ERP and BI level of implementation and the independent variable personal showing the size of the organization, for the private sector. The model explains 96,1% from the total variation of the variable personal (R²= 0,961). The rest of 3,9% is influenced by other residual factors not included in the model. (Table 1)

In conclusion hypothesis H₀₁ has been confirmed.

But in BI methods we found a weak link (R=0,167) and also for the private sector we found R=0,593<0,63. This regression coefficient R=0,593 shows an intermediate link in these case. (Table 2)

Table 1. Linear regression analysis between an independent variable called personal and a dependent variable called ERP_BI for private cases (proprietate=1)

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,172	1	,172	49,352	,020 ^a
	Residual	,007	2	,003		
	Total	,179	3			

a. Predictors: (Constant), personal

b. Dependent Variable: ERP_BI

c. Selecting only cases for which proprietate = 1

Table 2. Linear regression analysis between an independent variable called personal and a dependent variable called BI for private cases (propiertate=1)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	propiertate = 1 (Selected)			
1	,593 ^a	,352	,028	,36973

Tab a. Predictors: (Constant), personal

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,148	1	,148	1,086	,407 ^a
	Residual	,273	2	,137		
	Total	,422	3			

a. Predictors: (Constant), personal
 b. Dependent Variable: BI
 c. Selecting only cases for which propriertate = 1

For H₀₂

We used the effects induced by ERP implementation in all the organizations department through the clear profit. In these research we have focused over eight organizations. We used regression analysis, as a statistical method to evaluate the relation between one independent variable (the ERP level of implementation in the business department of the organization) and another continuous dependent variable (clear profit of the organization influenced by the ERP implementation). The model has been confirmed to be valid because the F test value were 6,843, with significant sig. <0.05 (0,04). The regression coefficient R=0,73 shows a functional dependency between the two variable, between the variable PN_efect showing the clear profit of the organization influenced by the ERP implementation in the years after, and the independent variable ERP_Mediu given to the ERP level of implementation in the business function of the company. In fact the correlation is 0,73 and the adjusted R square is 0,53. So the model explains only 53 % from the total variation of the variable personal (R²= 0,53). The rest of 47 % is influenced by other residual factors not included in the model. (Table 3)

Table 3. Linear regression analysis between an independent variable called ERP_Mediu and a dependent variable called PN_efect

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,730 ^a	,533	,455	,76035

a. Predictors: (Constant), ERP_Mediu

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,956	1	3,956	6,843	,040 ^a
	Residual	3,469	6	,578		
	Total	7,425	7			

a. Predictors: (Constant), ERP_Mediu

b. Dependent Variable: PN_efect

Discussion over the obtained results and their managerial implications

For hypothesis H₀₁ we have found out that only the dimension off the organization and the number of installed computers are of equal average according to the type of property (independent samples t test); There is also a good link between the above mentioned characteristics. One the other hand concerning the role played by the ERP applications, in the private sector, considered by us more performing, their isn't a strong link between dimension and the role of the ERP applications, although the correlate coefficient is good. When using advanced methods, of BI type, and analyzing their effect on organizations management the situation is discouraging as there is no good connection even in the private sector, but on the other hand there is an strong link between dimension and the implementation of the ERP an BI mix in private organizations. Therefore the hypothesis is only partial confirmed.

In the case of hypothesis H₀₂ we have concluded that the growth of the clear profit has equal average values according to the type of property (independent samples t test). Concerning the link between the implementation degree of ERP applications on organizations departments and their impact on clear profit growth, we have noticed that there is a good link. The F test considers a fairly high value and the significance value corresponding to the F statistics is slightly lower than 0,05 which confers significance to the linear relation between the two variables. Therefore the H₀₂ hypothesis is confirmed.

As a general conclusion is that public organizations successfully implement ERP applications, the private one already use the DSS, and the Human Resource Management (HRM) field represent an advanced element for the implementation of modern methods that combine IT and management.

Discussion and conclusions

In this paper we tried to investigate conceptually the research directions in the methodological-managerial field, and especially the influences on which the informational technology has developed in an unprecedented way in the last years, and which it may have on the management of the Romanian organizations. The proposed advanced methods included the entire organization, element which has to be taken into consideration by the Romanian companies as well, be they public institutions, or private institutions.

The starting point in regaining a decent place in Europe has to be the elaboration of a national strategy of promoting professional management which should set the goals

according to the status and needs of the national economy as well as the methods of accomplishing this, granting the necessary resources in order to obtain competitive advantages in the managerial and especially in the economic field. Such a judicious-conceived strategy, consistently implemented, can and should represent one of the main aspects of re-launching the Romanian economy and society in the complex and tough context of transition to the market economy but also of the globalization of the economic activities.

Our scientific and teaching activities over the past few years have attempted to point out certain essential elements of integrated information systems, used as decision and management instruments available for managers. Thus for more than seven years we have tried to induce the managers of the organizations, with which we have collaborated, the awareness that the ERP systems are most mere accounting applications. Actually accounting is not exactly the most remarkable advantage of the implementation of an integrated resource planning system, as it is mostly perceived. On the contrary an ERP is a corporate instrument which connects users with distinct responsibilities on the same platform, and involves an information exchange between department and the individual in charge, the decision maker.

Another direction of our activities was the awareness of both managers and end-users that information technology is an instrument that supposed to be use with maximum benefits, not a dangerous element for the employees and for the organization.

Future research will also include Small and Medium Business (SMB's) organizations which in the present economic environment probably represent one of the element to re launch the Romanian economy. This sector will be analyzed by the implementations that Senior Software company, through the SeniorERP application has carried out on the Romanian SMB's market.

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The Application of the Lean Management Principles and Methods - Opportunities and Hedges from the Romanian Employees

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Abstract

Purpose – *The purpose of the paper is to present some methods and principles of Lean Management and the findings of applied research.*

Methodology/approach – *The applied research aimed to identify some options to increase work performance and reduce waste of work. The population selected consists of students of the Technical University of Cluj-Napoca. Ten hypotheses were verified. The used method was the survey and the used tool was the questionnaire.*

Findings – *There were identified opportunities and hedges for the collaboration with a waste work reduction specialist and types of rewards that direct the employee efforts to reduce wasted work.*

Research limitations/implications – *The multistage sampling was used and the data processing took into consideration a total of 286 questionnaires.*

Practical implications – *In order to exploit the employees potential, the Romanian management has to know the principles and the methods of management that the foreign organizations have applied successfully and to recognize that every employee is an active being, ready to be involved in the improvement of work.*

Originality/value – *The promotion of applied research findings in the Romanian management can be a starting point in being aware that every employee could be an unexploited potential that by an adequate motivation system and by encouraging a proactive attitude is a valuable resource that can be exploited in the processes of changes within the production systems.*

Key words: *lean management, work waste and performance, statistics.*

Introduction

During the recent decades, especially the recent years, the rate of changes within the production systems has been extremely fast. The change has become a landmark for the modern society, the reference of organizations to change becoming determinant for their competitiveness and progress. First of all, customer requirements are in a continuous change. That means that organizations are constrained by the shorter and shorter time that they have to meet the market needs and by the more and more aggressive competition, in order to provide, in the minimum of time, competitive products in terms of quality and price. Second, the progress implies a continuous positive change and the necessity that the organization and its members will be able to accept, respond and adapt to the changes coming from the external and internal organizational environment.

Through the design of work tasks in the twenty century the organizations were asking for subordinate employees and for employees that perform tasks assigned by their boss. In the current century the work design approaches look on the employee as an active human being and give him the opportunity to be involved in decisions and development of the organization. This latter approach brings first the benefit of the increasing adaptability of the employees to the work situations in continuous change, and second, increases the attractiveness of work and the employee devotion to the employing organization.

We believe that work design in the current century should take into account the customer needs, should meet the requirements of the more and more complex and competitive work and requires the involvement of both management (by facing the

individual needs of the employees and by the democratization of work) and employees (by opening itself to change, learning and collaboration at work). To support this belief, bibliography and applied researches were achieved, the results of which are presented in this paper.

First Part - Theoretical background

From traditional production to Lean Production

The development of technology and the scientific management researches has led to increased work productivity but also has increased the risks associated to work.

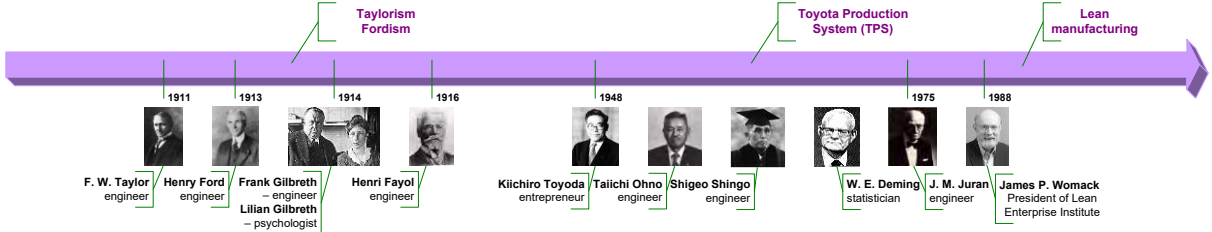


Fig. 1. Evolutions in the approach of production systems

In a first stage it was important to reduce the losses and to increase the work efficiency, by offering improved working conditions and also by reduce fatigue and redesign the technology for a better adaptation to users. The researches were extended by the development of time standards for technological operations and the development of standardized methods for the measurement and the analysis of work, to eliminate the unnecessary fatigue of employees. The traditional approach of production, by Ford Production System, stresses the importance of management for the success of the organization. The role of employee within the system was to perform simple work tasks by applying the labour standards set out by management.

In contrast to the initial developments (taylorism and fordism), when the involvement of management was crucial for the rationalization and the efficiency of work in the future developments a new model for the management of production systems was developed, the Japanese management. On the one hand, it was based on organizing production and logistics considering the interaction with customers and suppliers. On the other hand, it was based on involving the employees in the development and continuous improvement of processes in order to reduce waste within the system.

The competitiveness of the Japanese management model, based on the Toyota Production System, has been recognized internationally and throughout Europe by the development of the principles and methods of Lean production.

Toyota Production System

The pioneers of a new way of organizing production and logistics that should include the interactions with customers and suppliers, Taiichi Ohno, Shigeo Shingo and Eiji Toyoda developed an integrated socio-technical system and fourteen principles were collected in *The Toyota Way*.

Table 1. Philosophy and principles of the Toyota Production System

Toyota Production System		
Philosophy	Improving the system by complete elimination of waste	
Key Concepts	Just in Time	Each process produces only what is necessary in the next process.
	JIDOKA	When a problem occurs in the process, the equipment or technology stops immediately, preventing the production of defective products.
Toyota Principles		
I. Long term vision	1. Base your management decisions on a long-term philosophy, even at the expense of short-term financial goals.	
II. The right processes will produce the right results	2. Create a continuous process flow to reveal the problems	The work processes are reengineered to eliminate waste (<i>muda</i>) through a process of continuous improvement (<i>zen</i>).
	3. Use "Pull" systems to avoid overproduction	Method by which one process signals the predecessors the materials needed. Pull systems produce only the material reported by the next operation.
	4. Level out the workload (<i>heijunka</i>).	The method leads to the objective of minimizing waste (<i>muda</i>) without overloading the staff or the equipment (<i>muri</i>) and without creating variable production levels (<i>mura</i>).
	5. Build a culture of stopping to fix problems, to get quality right from the first	Quality is paramount (<i>jidoka</i>), any employee in the system has the authority to stop the process to signal a quality problem.
	6. Standardized work tasks and processes are the foundation for continuous improvement and employee empowerment	Although Toyota is a bureaucratic system, the way it is implemented allows continuous improvement (<i>kai-zen</i>) by the persons affected by the system. The system empowers the employee to support company growth and improvement.
	7. Use visual control so that no problem is hidden	The principle includes the <i>5S Process</i> used to make the work spaces efficient and productive, to help employees organize the work place, reduce the time for searching the necessary tools and improve the working environment.
	8. Use only reliable, thoroughly tested technology that serves your people and processes.	Technology is pulled (<i>pull</i>) by manufacturing, not pushed (<i>push</i>) by manufacturing.
	III. Add value to the organization by developing your people and partners	9. Develop leaders who understand the work well, who believe in long-term vision and can transmit it to the others.
10. Develop exceptional people and teams who follow the philosophy of your company.		Teams should consist of 4-5 employees and various levels of management. The success relies on the team, not on the individual.
11. Respect your extended network of partners and suppliers by challenging them and helping them improve.		Toyota treats suppliers challenging them to improving and providing functional teams to help them discover and solve problems so that they can become stronger and better.
IV. Continuously solving root problems leads to organizational learning	12. Go and see for yourself to thoroughly understand the situation (<i>Genchi Genbutsu</i>)	Toyota managers are expected "to go to source" to discover the operations. Without facing the real situation, managers will not understand the how it could be improved.
	13. Ensures decision making by consensus, slowly, thoroughly considering all options and implements decisions quickly (<i>nemawashi</i>)	
	14. Develop an organization that learns through permanent reflection (<i>hansei</i>) and continuous improvement.	

The application of Toyota principles has the effect of creating processes able to deliver the result demanded by customer and leads to system flexibility and elimination of seven types of waste:

- waste through overproduction: produce more than is necessary, before required
- waste in work processes: work longer than is necessary
- waste by waiting: waste of time and not working
- waste through conveyance: waste effort for transport parts, materials or finished products
- waste through excessive stocks: maintain excess inventory
- waste by moving raw materials: waste effort to move or arrange pieces
- waste from production errors: rework, repair or reprocess

The Toyota Production System is successfully applied in automobile production and industrial production and was recognized as a reference system in these industries. The methods of Toyota Production System can also be applied by other activity sectors in order to achieve the increasing productivity and to meet customer expectations (quality and delivery time). (<http://www.toyota-forklifts.ro>)

Complete Production Systems

Korge A., et al. (2009) points out that many companies use technology improperly and without implementing the appropriate organizational solutions, the causes being related to “deficiencies in the ergonomic work setup and lack of efficiency and of a customer-oriented culture”. These companies survive only by over-effort and by staff creativity and efficiency.

It is more and more obvious that the development of new methods of organizing is not enough and that it is crucial for the success of organization that all subsystems should be integrated. Korge A., et al. (2009) propose the integration of production organizing methods in a complete production system, covering the Toyota principles and mention that basic concepts and words can be changed, but that “four principles will be crucial for organizational development in the next years”: consistent use of innovative working methods, integration in a complete harmonious system, staff based socio-technical observation, permanent aspiration to excellence. (Korge A., et al., 2009)

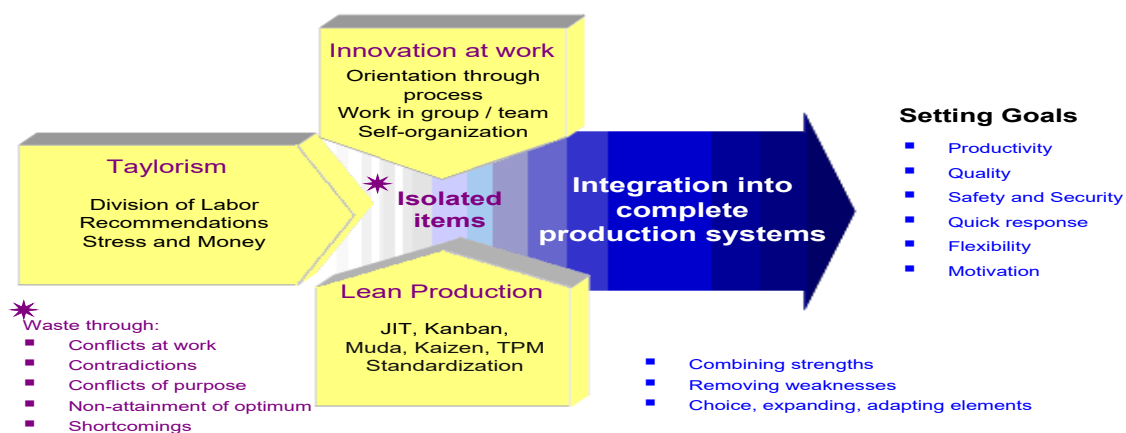


Fig. 2. Integration of the methods for organizing production in Complete Production Systems

Processing after: Alex KORGE, et al., "Ganzheitliche Produktionssysteme", in Bullinger H.J., et al. (eds.), *Handbuch Unternehmensorganisation: Strategien, Planung, Umsetzung*, Springer Berlin Heidelberg (2009): 570.

Hence, in addition to productivity, quality, flexibility and quick response to customer demand, the result of the integration of systems consists in employee motivation, safety and security at workplace.

Lean Management, support for sustainability

Being a sum of principles and methods derived from the Toyota Production System, Lean Management requires employees to participate in improving the system by reducing the seven types of waste in all organizational departments: human relations, relations with suppliers, technology, material and supply management.



Fig. 3. The seven types of waste in the system

Lean Management is based on the principle of flexibility and quick response to the demand of products or services, aiming to increase the effectiveness and efficiency of the entire process chain that creates added value to products and services. Accepting that value represents “what customer is ready to pay” (<http://leanromania.wordpress.com>) the management of Lean production is based on improving the system performance by maximizing the added value by internal processes to the product or service and by minimizing actions, decisions or internal processes that lead to excessive consumption (losses, waste etc.).

The management of the production and supply flows is obtained by Just-in-time methods, based on the current market demand, while the human resource management involves the use of specific methods and tools.

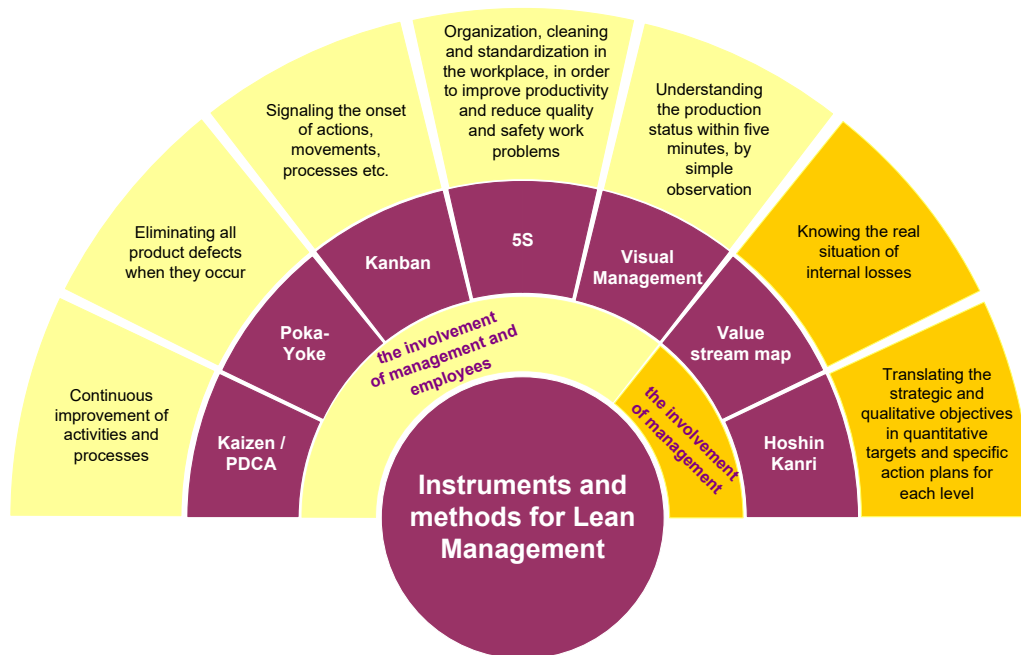


Fig. 4. Instruments and methods for Lean Management

The summary of methods and tools used in Lean Management shows that the successful implementation of Japanese management depends on:

- management and employee involvement: in teamwork, in developing, maintaining and improving work standards and improving the system by eliminating the items that do not add value to product or service requested by client;
- management involvement: in setting and transmitting the objectives and action plans for each organizational level and in public communication of the current state of the organization.

Discussing about measures for the sustainable management success and about the contribution of Lean production principles in management ethics, Dickmann P. (2007) includes “management contracts that impulse the sustainable development throughout the organization” among “the goals that the management really needs to focus on” and stresses that Lean Management enables sustainable economic development and prevents staff turnover. Stressing that “problems are treasures” the author mentions the importance of rewarding the employees based on the individual contribution in the system and proposes that remuneration contains “a balanced mix of components on short, medium and long term”.

The advantage of this staff reward approach is the increasing efficiency, being evaluated the setting of targets over time and the results obtained, “the rewarding being better assorted because the individual chart of staff ergonomic efficiency has a tendency to increase and realistically reflects the employee’s contribution” (Dickmann P., 2007).

The contribution of Lean Management to increasing competitiveness

The need to increase organization competitiveness is more and more under consideration. The economic environment changes occurred in recent years have shown that, to meet competition, organizations must, on the one hand, be prepared to react to various changes and have, on the other hand, the ability to respond promptly to customer demand by providing high quality products or services at a minimum price and deliver them in the shortest time. Therefore, the competitiveness of organizations is, in addition to strategic orientation, the result of processes carried out within the production system and made with minimal costs.

Many aspects are considered in order to minimize costs, and increasing productivity is one of them. The issues addressed by the management of production systems for the productivity increase focuses especially on work productivity, this aspect will be understood if we remember that during the total production time, 85 percents are unproductive time, and most of them are caused by the process of work.

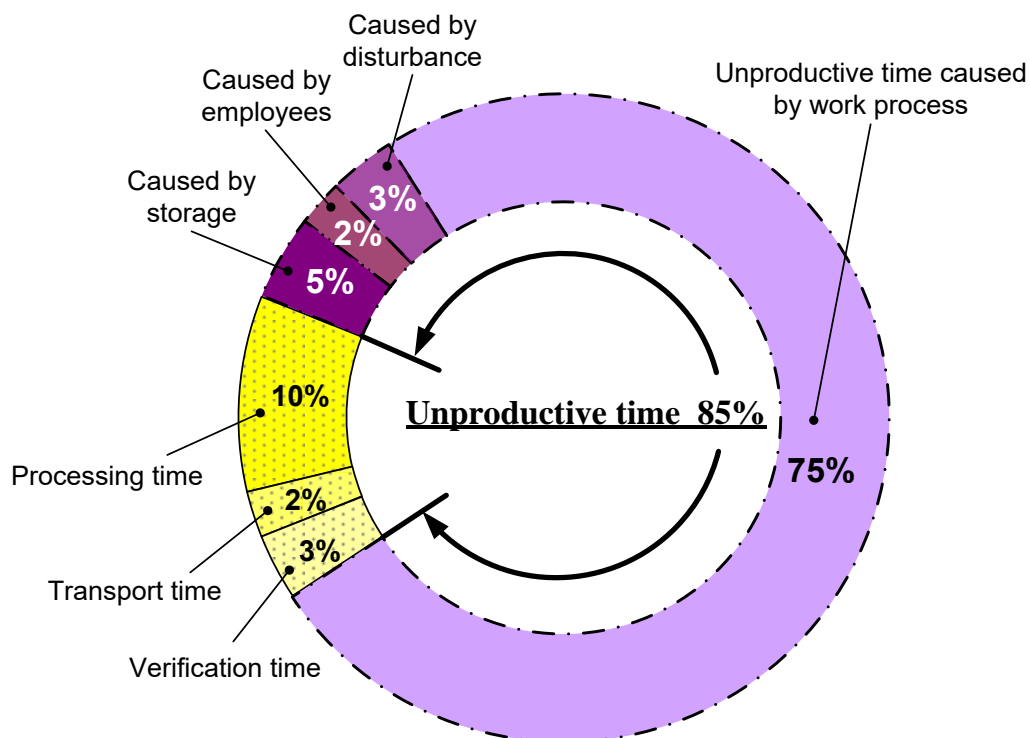


Fig. 5. The proportion of unproductive time in the total production time – 85%
Processing after: Zäpfel G., Grundzüge des Produktions- und Logistikmanagement, R.
Oldenbourg Verlag München Wien, 2. Auflage (2001): 187.

This situation points out to the need to reduce the work process time. In this respect, the Lean Management principles, methods and tools provide benefits of time setup reduction and time changeover techniques.

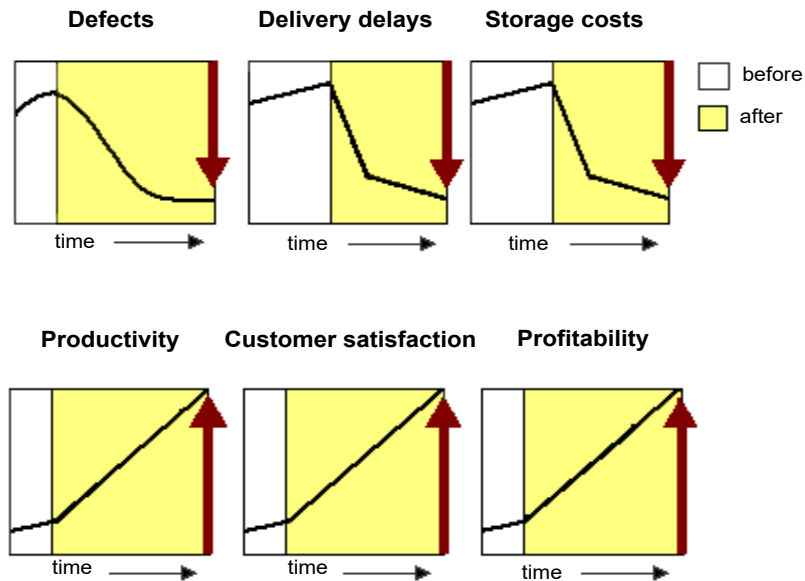


Fig. 6. The benefits of Lean Management application
 Processing after: http://www.mamtc.com/lean/building_quickChange.asp

Lean Management in Romania

Since 2005, Lean Management methods have been applied in Romanian organizations by carrying out projects coordinated by specialists, members of the Association of Lean Experts in Romania (<http://www.lean.ro>). Among the results obtained in these projects are: cost reduction, manufacturing time reduction, inventory reduction, productivity increase, keeping and reduction of delivery times or reduction of response time to customer requests.

The Lean methods that have been applied in Romanian companies are Kaizen, 5S and optimizing production flow. A problem noticed was that the employees and managers at different levels are not fully implicated in the complete implementation of the methods and in supporting change. (<http://leanromania.wordpress.com>).

Indeed, the success of the implementation of Lean management methods depends, on the one hand, on both management and employee involvement in implementing the change, and, on the other hand, on identifying motivating factors in supporting change by all stakeholders.

Second Part – The Applied Research Hypothesis

The need for both management and employees to be concerned with improving the processes in which they are directly involved and those at the system level was supported by proposing the term *ergo-organization* to refer to *the organization that capitalizes human resource by involving the management and the employees in improving the production system to enhance the performance of work*. For testing the model *Steps to ergo-organization*, presented in a previous paper (Firescu, 2008), a series of exploratory researches have been conducted. This paper presents the results of an

exploratory research conducted in order to identify the perception of Romanian employees regarding performance and waste of work.

Ten hypotheses on work performance (H₀₁–H₀₄) and involvement in wasted work reduction (H₀₅–H₀₁₀) were stated and tested, regarding:

Table 2. The hypothesis of the applied research

The research hypothesis	Percent	Critical ratio (RC)	The hypothesis confirmed
H ₀₁ : Not more than 95% of students consider that management should be interested in work performance. H ₁₁ : More than 95% of students consider that management should be interested in work performance.	98,5	2,276	H ₁₁
H ₀₂ : Not more than 95% of students consider that each employee should be interested in work performance. H ₁₂ : More than 95% of students consider that each employee should be interested in work performance.	94	-0,732	H ₀₂
H ₀₃ : Not more than 95% of students would make, at the future workplace, proposals to increase the performance of their work. H ₁₃ : More than 95% of students would make, at the future workplace, proposals to increase the performance of their work.	52,4	-0,883	H ₀₃
H ₀₄ : Not more than 45% of students would make, at the future workplace, proposals to increase the performance of their work, because they believe they have the right to develop their own ideas and actions. H ₁₄ : More than 45% of students would make, at the future workplace, proposals to increase the performance of their work, because they believe they have the right to develop their own ideas and actions.	40,9	-1,393	H ₀₄
H ₀₅ : Not more than 80% of students consider a waste work reduction specialist to be useful in the organization H ₁₅ : More than 80% of students consider a waste work reduction specialist to be useful in the organization.	84,9	2,064	H ₁₅
H ₀₆ : If there were a waste work reduction specialist in the organization, not more than 50% of students would certainly work with it, by accepting solutions. H ₁₆ : If there were a waste work reduction specialist in organization, more than 50% of students would certainly work with it, by accepting solutions.	44,6	-1,807	H ₀₆
H ₀₇ : Not more than 10% of students believe that "a waste work reduction specialist" is the method that would help them reduce wasted work. H ₁₇ : More than 10% of students believe that "a waste work reduction specialist" is the method that would help them reduce wasted work.	16,8	3,826	H ₁₇
H ₀₈ : At least 50% of students believe that "participation in a training course" is the method that would help them to reduce waste at work. H ₁₈ : Less than 50% of students believe that "participation in a training course" is the method that would help them to reduce wasted work.	41,4	-2,903	H ₁₈
H ₀₉ : Not more than 50% of students believe that "the responsibility regarding work process and workplace improvement" is the method that would help them reduce waste at work. H ₁₉ : More than 50% of students believe that "the responsibility regarding work process and workplace improvement" is the method that would help them to reduce wasted work.	49,1	-0,303	H ₀₉
H ₀₁₀ : At least 65% of students consider that they should be motivated by additional rewards to direct their efforts to reduce waste at work. H ₁₁₀ : Less than 65% of students consider that they should be motivated by additional rewards to direct their efforts to reduce wasted work.	58,6	-2,196	H ₁₁₀

- work performance stakeholders: company management and / or every employee;
- collaboration, at the future workplace, by proposing solutions to improve work performance;
- the utility, inside the company, of a waste work reduction specialist;
- collaboration with the specialist, by accepting solutions for reduce waste;
- identifying the best methods to reduce waste at work;
- the need for additional rewards to guide efforts to reduce wasted work.

Subjects and methods

The applied research aimed both to identify some options to increase work performance and to reduce wasted work, and was attained in a system that took into account first „the perfect workplace” for the Romanian employees, and second, the profile of the employees. This latter restriction was established in order to identify the existence of some links between the employee opinion and such issues as: work experience in a real production system, age, gender and knowledge in disciplines like communication, management, ergonomics and work organization.

It was considered that the students of specializations with curricula including courses in disciplines like communication, management, ergonomics and work organization, are subject to the mentioned restriction. Therefore the population selected for the applied research was made up of students from the Technical University of Cluj-Napoca, Faculty of the Machine Building.

The method used to obtain primary data was the survey and the tool was the questionnaire. The multistage sampling (Bacali, 2007) was used for the accomplishment of the survey. The data processing took into consideration a total of 286 questionnaires, which allows us to say that the survey was conducted with an error limit of 5% and a degree of confidence higher than 90%.

Data processing

SPSS 10.0 for Windows was used for data analysis and or testing the hypothesis parametric tests, such as:

- Left one-sided test - on the lower confidence interval;
- Right one-sided test - on the upper confidence interval.

Because the confidence interval for a proportion could not be directly calculated with the SPSS programm, Microsoft Excel was used for testing the hypothesis. A confidence level of 95% was chosen and the (1.1) and (1.2) (Jaba E., Grama A., 2004) formulas were used.

$$RC = \frac{p-f}{S_p} \quad (1.1)$$

$$S_p = \sqrt{\frac{f \cdot (100 - f)}{n}} \quad (1.2)$$

where: RC = critical ratio, p = the proposed value for percentage, f = the estimated percentage value, S_p = standard error, n = sample size.

For testing the equality of means in subgroups differentiated by age, gender, work experience and knowledge of students in communication, management, ergonomics and work organization were used:

- One-Way ANOVA test - for independent variables with more than three subgroups;
- Error bar process;
- Independent-Sample T test - for independent variables with two subgroups.

The assessment of the degree of association on subgroups differentiated by students knowledge in communication, management, ergonomics and work organization, work experience, gender and age was done by calculating the rank correlation coefficient and the contingency coefficient.

Results

There were identified reasons

Table 3. The reasons for the collaboration with a waste work reduction specialist

Reasons for collaboration with a waste work reduction specialist - completed by students in questionnaires

the specialist would be more competent and have more experience
it is important to work correctly
the work would be easier
a foreign person can easily observe some problems
both the employee and the company are interested in proposing new ideas
this would save time, which is very precious
it is in everyone's interest to reduce waste and obtain better results
Collaboration would help in promotion and career
in order to be more responsible and more competitive at work
Collaboration would lead to professional development
Collaboration would lead to work more easily in the same time
Collaboration in the workplace, and therefore efficiency, would be increase
job satisfaction would increase if the employees knew that they produce more with less effort
There would be more free time
this would be in their own interest
a specialist should speak to the point

and hedges

Table 4. Hedges for the collaboration with a waste work reduction specialist

Hedges for collaboration with a waste work reduction specialist - completed by students in questionnaires
this is not the Romanian mentality
I will not recognize the mistakes
this is not my job, there are other employees who responsible for wasted work reduction
I don't know how I will react
I would perceive him as a person who wishes to promote
I would immediately be disapproved, however, my ideas would be taken and assumed by other persons
I know how to organize my time at work

for the collaboration with a waste work reduction specialist and types of rewards that direct the employee efforts to reduce wasted work.

Table 5. Types of rewards to direct the efforts to reduce wasted work

Additional rewards – completed by students in questionnaires
to take account of developments at work - performance recognition
implementation of good ideas - to consider proposals
Prizes, holiday bonuses, holiday bonus vouchers, bonuses
promotion
understanding, if necessary
vacation, trips with colleagues, additional vacation days, free days
increasing responsibility
Value vouchers, meal vouchers
Boss appreciation, emphasizing qualities in front of the team
shorter program, flexible program
Good conditions at work, comfort
breaks for rest, free time
Improvement
Appreciation from colleagues
Granting degrees / diploma
Open communication
Team spirit at work
Work diversity
job security
free tickets for treatment and rest
company car
Respect and consideration
Raffles with gains
a good recommendation when changing the job
increased independence in work
providing new opportunities
collective harmony
Honesty

The results of the ten hypotheses testing confirms, with a 95% confidence, that:

- More than 95% of students consider that management should be interested in work performance.
- Not more than 95% of students consider that each employee should be interested in work performance.
- Not more than 95% of students would make, at the future workplace, proposals to increase the performance of their work.
- Not more than 45% of students would make, at the future workplace, proposals to increase the performance of their work, because they believe they have the right to develop their own ideas and actions.
- More than 80% of students consider a waste work reduction specialist to be useful in the organization.
- If there were a waste work reduction specialist in organization, not more than 50% of students would certainly work with it, by accepting solutions.
- More than 10% of students believe that "a waste work reduction specialist" is the method that would help them reduce wasted work.
- Less than 50% of students believe that "participation in a training course" is the method that would help them to reduce wasted work.
- Not more than 50% of students believe that "the responsibility regarding work process and workplace improvement" is the method that would help them reduce wasted work.
- Less than 65% of students consider that they should be motivated by additional rewards to direct their efforts to reduce wasted work.

The statistical links identified between the responses of students and their knowledge in communication, management, ergonomics and work organization, work experience, gender or age are presented in table 6.

Table 6. The statistical links identified between the responses of students and their knowledge in communication, management, ergonomics and work organization, work experience, gender or age

The hypothesis confirmed	Statistics		Correlation with:			
			knowledge	experience	gender	age
H₁₁	Contingency coefficient	C	0,155	0,080	0,086	0,166
		Sig.	0,548	0,863	0,485	0,702
	Statistical links		-	-	-	-
H₀₂	Contingency coefficient	C	0,248	0,116	0,115	0,200
		Sig.	0,011	0,484	0,194	0,237
	Statistical links		●	-	-	-
H₀₃	Fisher	F	2,212	5,165	-	0,619
		Sig.	0,087	-	-	0,650
	Independent-Sample T Test	Z	-	-	0,239	-
		Sig.	-	-	0,811	-
	Spearman	Θ	-	-	-	0,049
		Sig. (2-tailed)	-	-	-	0,416
	Contingency coefficient	C	0,204	0,270*	0,121	0,217
		Sig.	0,409	0,004	0,394	0,611
Statistical links		-	●	-	-	

The hypothesis confirmed	Statistics		Correlation with:			
			knowledge	experience	gender	age
H ₁₅	Contingency coefficient	C	0,178	0,099	0,090	0,244
		Sig.	0,155	0,593	0,333	0,025
	Statistical links		-	-	-	●
H ₀₆	Fisher	F	0,092	3,081	-	2,124
		Sig.	0,964	0,047	-	0,078
	Independent-Sample T Test	Z	-	-	-0,324	-
		Sig.	-	-	0,746	-
	Spearman	ϑ	-	-	-	0,210*
		Sig. (2-tailed)	-	-	-	0,000
	Contingency coefficient	C	0,263	0,259	0,142	0,388*
		Sig.	0,053	0,010	0,239	0,000
Statistical links		-	●	-	●	
H ₁₇	Contingency coefficient	C	0,052	0,093	0,001	0,151
		Sig.	0,859	0,289	0,980	0,164
	Statistical links		-	-	-	-
H ₁₈	Contingency coefficient	C	0,049	0,212*	0,020	0,128
		Sig.	0,875	0,001	0,746	0,327
	Statistical links		-	●	-	-
H ₀₉	Contingency coefficient	C	0,077	0,195*	0,010	0,100
		Sig.	0,642	0,004	0,871	0,589
	Statistical links		-	●	-	-
H ₁₁₀	Contingency coefficient	C	0,162	0,147	0,126	0,202
		Sig.	0,065	0,053	0,040	0,024
	Statistical links		-	-	●	●

Third part - Discussions

The findings of the applied research represent a vision of the work from the point of view of the student to the competitive employee and investigate work design through an innovative perspective, on the one hand, and through an uncensored perspective by the reality of work in the Romanian production systems, on the other hand.

We can note that the lack of links between the opinion regarding work performance stakeholders (company management and / or every employee) and experience, gender or age were identified.

There was found a weak, statistically significant, between *opinion regarding the implication of each employee in work performance* and *knowledge* link of association (C=0.248).

There was found a weak, statistically significant, between *opinion regarding the collaboration by proposing solutions to improve work performance* and *experience* link of association (C=0.270).

There was found a weak, statistically significant, between *opinion regarding the utility, within the company, of a waste work reduction specialist* and *age* link of association (C=0.244).

There were found a weak, statistically significant, between *opinion regarding the collaboration with the specialist, by accepting solutions for reducing wasted work* and *experience* link of association (C=0.259) and a weak, statistically significant, between *opinion regarding the collaboration with the specialist, by accepting solutions for reducing wasted work* and *age* link of association (C=0.388).

Conclusions

The results of the applied research demonstrate that the Romanian employees are a potential that the management has available in order to meet the difficulties of the differentiation from competitors, difficulties which has amplified along with the Romania's EU integration and with the changes in the external environment (global crisis).

In order to exploit this potential, the Romanian management has to know first the principles and the methods of management that the foreign organizations have successfully applied and second, to recognize that every employee is an active being, ready to be involved in the improvement of work performance, and hence of organization performance.

We believe that the promotion of applied research findings in the Romanian management can be a starting point in being aware that every employee could be an unexploited potential that by an adequate motivation system and by encouraging a proactive attitude concerning the improvement of the work performance is a valuable resource that can be exploited in the processes of changes within the production systems.

Notes

¹ The Japanese term *muda* was defined by Fujio Cho as anything other than the minimum amount of equipment, materials, parts, space, and worker's time, which are absolutely essential to add value to the product. (Walder J., et al., 2007).

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Insights Regarding Quality Management Systems as Extended Products

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Abstract

Purpose – *The main objective of this paper is to observe the importance and the economic viability of the extended service concept applied to Quality Management Systems (QMS). Others purposes of the study are to reveal the importance of extending service concept as a competitive advantage, and finally reveal a good practices log for consultancy organizations in quality domain in order to achieve a better client satisfaction rate, continuous improvement of their own and their clients businesses.*

Methodology/approach – *The survey reached its objective by using short studies on Marketing's and Quality Management's new paradigms and practical behaviors. At the same time, the authors have performed a case study in the North-Western development region of Romania regarding companies' needs and expectation when requiring assistance for QMS development.*

Findings – *Based on the case study we can infer that organizations desire an extended service when approaching a consultant for assistance in implementing QMS. Development potential appears to exist both for the improvement of the current services, as well for adding new ones to this type of business.*

Research limitations/implications – *The purpose of this survey is to form the baseline for the validation of the extended product concept in this field, with out the intention of being statistically relevant. That is why the number of organizations studied is limited.*

Originality/value – *The current paper brings into attention the concept of "Extended Product" that can be applied on any kind of product or service and on a small level demonstrates the main purpose of this concept, which is obtaining competitive advantage.*

Key words: *Extended Product, Extended Services, Quality Management System*

1. INTRODUCTION

As the Romanian economy has undergone 20 years of change since 1989, almost the same can be said about the ISO 9001 quality management model, which first appeared in 1987. In the past two decades, quality management systems (QMS) have become commodity products that any respectable company wants to purchase and implement in their organization. One can say that this approach has achieved maturity, becoming accessible to everyone, and no longer representing a major competitive advantage. However, companies tend to have more dynamic desires and expectations form a QMS, especially in the current economic situation. In this context, the authors of this paper believe that QMS, as a knowledge product, can be further extended so that companies could increase their potential benefits from its use.

2. THE RATIONALE FOR IMPLEMENTING QMS

According to David Hoyle (2002), the QMS represents the means by which an organization achieves its objectives and it should permeate every function and activity of the organization. This requires the management to think of the company as a set of interconnected processes that include tasks, resources and behaviors, which has the purpose of obtaining a product or service that better satisfies the requirements of the customer.

For an organization, after achieving a certain level of maturity and development, it is absolutely necessary to have a managerial system in place for steering the organization, as no sole individual can do that anymore. If the company develops its own informal management system it is rather difficult to control all the departments, all the processes and all the employees, so that possible problems, unnecessary costs, low quality products and services or unsatisfied costumers, might appear. The solution proposed by the ISO 9001 model is to build a structured management system based on the good managerial practices gathered, distilled and validated by ISO's expertise.

3. EXTENDING THE QMS PRODUCT

In view of Philip Kotler (1997), the product represents a bundle of characteristics offered on the market, which can be recognized, bought and consumed, with the purpose of satisfying a need. Kotler's vision unfolds the product on five levels:

- Basic product – has the purpose to satisfy a need;
- Generic product – the basic product with its related characteristics;
- Expected product – the product with its characteristics and all the attributes that the buyer expects from the product;
- Amplified product – all the characteristics that the provider offers to the generic product, to differentiate from competitors;
- Innovated product – includes the utilization of innovation, the exploitation of opportunities and continuous improvement.

Theodor Levitt (1980) proposed a model of extended product which resembles with Ph. Kotler's vision, as seen in Fig.1.



Fig.1. Model of total product adapted after the model proposed by T. Levitt

The authors propose a new approach based on T. Levitt and Ph. Kotler vision on extended product. The product concept should start with client's expectations and desires as well as the market's requirements. Than when we refer to extended product it is necessary to consider as the most important part the concept of continuous improvement, sustainable development and environmental protection. A simple representation of this concept can be seen in Fig.2

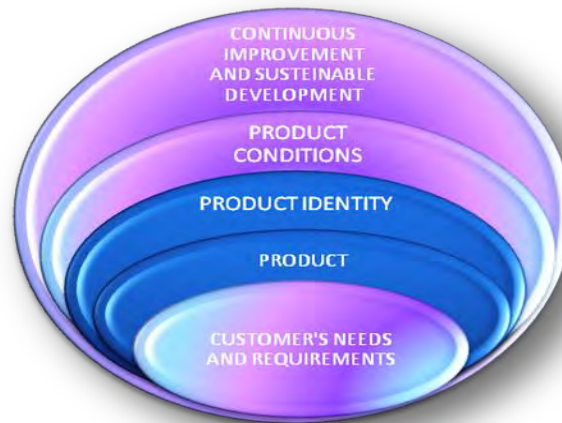


Fig. 2. Simple representation of extended product concept based on T. Levitt's and Ph. Kotler's vision

Starting with this general model, we can extend the QMS services with a better understanding of the market, an improved identification of client's needs and a better adaptation to client's requirements.

As described by Ph. Kotler (1997), in the "Product's Conditions" field, are those elements which give the extended product's dimension, and most of the time this elements make the difference between competitors, being used by organizations for obtaining competitive advantage. The general elements are:

- Delivery – is one of the services annexed to the basic product, it could imply delays and a consistent amount of cost. In this step it has decisions to be taken regarding client's characteristics for choosing the right solution of transport.
In the discussed case of extended QMS services the delivery implies the right way of developing and the right period of time to implement the system. It means an effective and an efficient approach to this phase of the project.
- Warranty – according to current laws (Romanian Law no. 449/2003, 2008) this means "any engagement assumed by the provider to the user, without the implying of supplementary costs, for repayment of the paid price, repair or replacement of bought product, if this product doesn't meet the specification in the warranty document or in the advertisement afferent to the product"
In QMS services the guaranties represents the promises given by the provider that the system will achieve its objectives. In general, the guaranties are not often used in this kind of business because of the multitude of variables that can negatively influence the path of achieving the objectives, variables that do not depend on the provider.
- Assembling and service – this services can be offered or not by organizations, for free, or on charge.
For QMS this means readjusting the system after a period of time, for the new needs and requirements.
- Contract terms – legal conditions, rights and obligations, agreed price, payment terms.

It is a fact that, in order to face competition, an organization should have a strategy either by cost or by differentiation. In general, in the market for QMS development, prices have grown close together, so the question is how can a company providing support for the implementation of QMS obtain a competitive advantage?

The possible solution addressed in this paper discusses the extension potential of each stage in the QMS development process. As such, in Table.1 is presented a model for this undertaking, together with the required steps that a consultant should assist a company within the possible additional elements that it providing more value to the customer:

Table1. Stage, steps and possible extensions of QMS

Table.1 Stage, steps and possible extensions of a QMS		
QMS Stage	Required steps	Possible extensions
<i>Customer relationship</i>	Determine business characteristics, Negotiate delivery conditions.	Identifying business vision and strategy, Identifying the requirements of the customer's customers,
<i>Design and development</i>	Elaborate quality policy/objectives, Identify, map and reengineer the necessary processes.	Involve the company's personnel; Ensure modularity of the documentation; Integrate IT&C solutions;
<i>Implementation</i>	Application of the established rules; Collection of records for evaluation.	Teach and use structured methods and instruments to reduce variation and improve results;
<i>Validation</i>	Audit conformity by third party.	Coach audit process and commit to continuous improvement;
<i>Maintenance</i>	Maintain conformity; Reduce workload/documentation.	Support improvement of performances; Allocate key personnel to support the company;
<i>Transformation</i>	Offer consultancy for additional standardized systems.	Offer mix of competences for continued assistance, both in standardized systems and beyond (e.g. marketing).

4. CASE STUDY

In the last 15 years, we have witnessed a rapid growth in business services. Business services are a complex and evolving group of intermediary activities that include financial, legal, management, personnel, public relations, advertising and marketing, connecting client firms located in a particular place with expertise that may have been developed in other regional contexts. (Grete Rusten, John R. Bryson, Hallgeir Gammelsæter, 2004). From this point of view, the concept of extended QMS product can be seen as an integrated business service.

In order to test this concept a survey has been performed. The design of the survey is based on a focus group from the North-Western region of Romania, which reflects the economic profile as it can be inferred from Regional Development Agency's (A.D.R.) strategic planning documents. The results of the survey will be analyzed to draw upon possible good practices that consultancy companies could implement in order to better support their customers.

Based on A.D.R. (2007) presentation we have identified six main interest industries for Romania's North-West region. This industries are important to this region for develop and growth, because of the great number of existing companies in this fields and because of the available personnel.

Romania's North-West Region industries of interest:

- Automotive industry;
- Furniture industry;
- Tourism;
- Information Technology and Communications;
- Agriculture;
- Higher education and research.

On these fields authors have collaborated with companies that agreed to answer to a series of questions regarding their satisfaction on already implemented QMS and their opening to the new concept of regarding QMS as an extended service. Also other objective of this questionnaire was to identify the real reason why organizations pay for this kind of services. From this answers consultancy companies can better design QMS services for all kind of clients with all kinds of requirements.

The major objective of the questionnaire, besides verifying the extended product concept was to identify in what step of creating and implementing QMS most problems appear and what was the reason of their occurrence. By understanding these problems consultancy organizations can improve the model of QMS implementation.

Results highlighted the fact that a great number of organizations do not know if the system achieved its objectives and if the QMS had created or not added value.

5. RESULTS ANALYSIS

In the above considerate sample of thirteen companies, from all six industries described earlier, we have identified that 55.60 percent of companies from the target group had bought this services for their cost and business optimization, and the rest op 44.4 percent have implemented QMS just as an image advantage.

The results indicate that almost 60 percent of the companies had done their research in order to find the right company to design and implement a QMS in their businesses. The main reasons for choosing between consultancy companies was the "Name" and the "Image" of that company on the consultancy market (45 percent), the other reason was the speed of implementation (10 percent). Surprisingly, the other major reason for choosing the right company to implement QMS was the diverse offer of consultancy services like: quality, marketing, environment, human resources, etc. (45 percent), as seen in Fig.3.

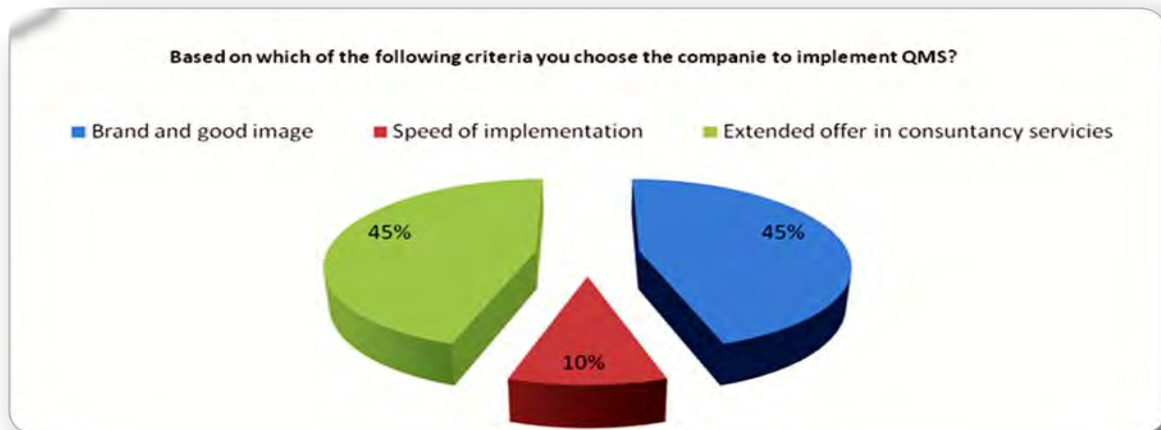


Fig. 3. The validation of extended product/service concept as a competitive advantage

This means that even if the companies were not very popular, or they did not have a strong advertising, the fact that they extended their “product”, the QMS service, was, from the clients’ perspective, as important as if they were well known and experienced companies. This comes to support the propose concept.

Sustaining this concept, 12.50 percent of companies have declared that they would change they original QMS service provider, if they could, for a consultancy provider with an extended service, even if they would have to pay a higher price. This result supports the idea that applying the concept of extended product offers companies competitive advantage and it is an economic factor.

According to the questionnaire the entire group was satisfied or completely satisfied by the companies that implemented the QMS in their organization, but they were some problems in the different stage of implementation. 70 percent of the group had had problems in the actual implementation stage. 15 percent of the group has had problems because of inadequate identification of their needs and requirements, and the other 15 percent consider that there were problems with tailoring the system for their specific business profile, as seen in Fig.4. The main reasons for these problems can be resumed as communication deficits between employees and consultants. For this reason personnel consider that the QMS is difficult to understand and of course difficult to transmit to the whole organization. The QMS is seen as very bureaucratic, people do not understand the purpose of this new hard work, and tend to reject the consultants that are “interfering” in their job.

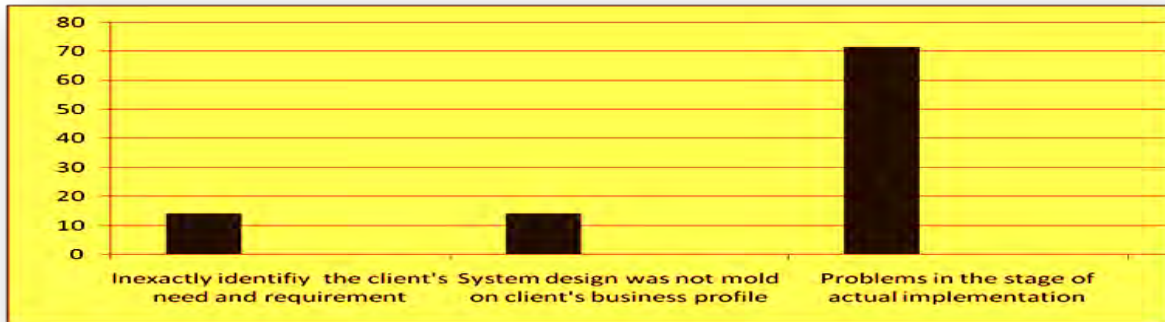


Fig. 4. Stages of implementation where problems occurred

Asked if they would change the consultancy company if they were to take it all over again, 44.40 percent said they wouldn't, but 22.30 percent considered that it would have been better if they had chosen a consultancy company that can also offer different types of consultancy (marketing research services, cost minimizing programs, cost control programs, environmental protection certification etc.), and 33.30 percent would change the consultancy firm for one that can faster implement the QMS.

Asked about the changes in the organization after the first year of QMS function, authors reached next results: for 15 percent of the companies there were no major changes, 56 percent of companies did not make a concrete performance evaluation, and just 29 percent had noticed cost reduction, Fig.5.

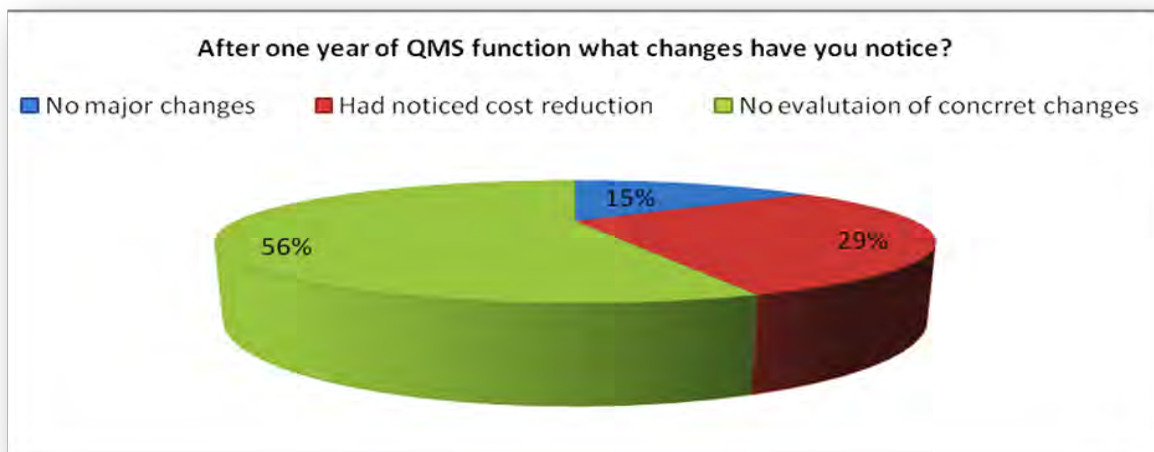


Fig.5. Real changes in organizations after one year of QMS function

In the survey, authors propose the new paradigms of continuous improvement and sustainable development for extending the QMS services. The questionnaire reveals the fact that more than 50 percent of the companies, that already have implemented a QMS, are interested on improvement and development. This can be done through: re-auditing, QMS upgrades, cost reduction programs, and all the other services that an consultancy organization with extended services can provide.

6. CONCLUSIONS

Transforming quality systems into extended products bring a more concrete dimension to the approaches of continuous improvement and sustainable development that many companies are trying to implement. Moreover, the concept and the issues regarding its validation can serve to demonstrate the value creation potential of the market for QMS development.

As shown in the case study results, an extended service will bring consultancy organizations a competitive advantage, a better place on the market and finally, more clients. But the most important stage in this kind of business is to completely satisfy the client's requirements. The most problems occurred in the phases of accurately identifying the needs, in order to design a system mold on client's business profile. Also, the implementation process took too long and it started to interfere with the productivity, there were communication deficiencies, and of course, in many cases, the quality system didn't produced the expected added value. From this information we can generate a short "Troubleshooting Guide" for consultants that implement QMS in order to obtain a better client satisfaction.

A clear orientation towards an improved and extended service in the field of QMS implementation assistance could have a wide impact on the market, as it would not be confined only to the companies that receive the assistance, but it would extend its benefits to their own customers also.

Further research on this topic should include a particularization on A.D.R.'s main interest industries and developing more complex questionnaire on a representative sample in order to a complete validate of extended QMS services in a right statistical view.

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The Quality Digraph Model - A TQM Assessment Tool

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Abstract

Purpose- *The paper proposes a digraph model used as an assessment tool, that allows the understanding of the interactions between the EFQM model criteria, for the systemic analysis and the evaluation of the real organization achievements and needs.*

Methodology/approach- *Our research approach consists of developing a digraph model of the interactions between the EFQM criteria. This model is implemented as dedicated software to evaluate the overall system performance. The software was implemented using the Visual Basic .NET development environment. Matrix representation is useful in analyzing the digraph model mathematically and for computer processing. In order to obtain the Quality Index which represents the performance of the system (organization) by a single number, the permanent of the matrix was calculated.*

Findings -*The paper presents the digraph model application on a hypothetical example. The aims are: to calculate the Quality Index, to identify the influence of the accomplishment degree of the EFQM model criteria on the Quality Index, to identify the influence of the criterion accomplishment on the degree of fulfillment of other criteria.*

Research limitations/implications - *In this paper there was developed the application in order to prove the viability of the method. The application doesn't have a mechanism to acquire the criteria interdependencies. This will be the aim of a future development.*

Practical implications - *The Matrix representation and especially the permanent of the matrix provide the Quality Index as a useful tool in reviewing the current state and the business performance.*

Originality/value- *The Quality Index could be considered as a useful tool in reviewing the current state, to identify current levels of organizational functioning and areas in need of change. The calculation of the index on the level of the organization provides a comparative basis for future improvement.*

Key words: *TQM, EFQM model, digraph model*

Introduction and theoretical background

A brief overview of the key moments that marked the Total Quality Management (TQM) evolution is absolutely necessary in order to understand the current state. The TQM doctrine began in Japan in the '50s and was enthusiastically taken up in the USA in the '80s. It proclaims that a genuine recognition of the customer's needs and demands is vital to a company's success. It also stresses the importance of involving employees in the quality movement and the need to view business activities as processes, with a goal of continuous improvement. In Europe, TQM is gradually built up although progress remains slow in several sectors and countries. Compared with 55% in the USA and 53% in Asia, only 30% of European companies have adopted TQM. In certain European countries, such as Germany, TQM has had relatively little impact because quality has always been established as an important management consideration. In Eastern Europe, continuous improvement of quality ideology was quickly embraced in the last twenty years, but more as compliance to the requirements of standards in force (ISO 9000 series) than a mentality model. Consequently, there are several problems in implementing TQM. It is not always easy to gain the support of employees, especially in those companies where morale has been undermined by redundancies or where the top management is seen to lack a proper commitment to quality. Also, an obsession with methodology and standards can distract a company from chasing sales. Excessive bureaucracy, for example

filling in forms and following detailed procedures, can disillusion employees. Early in the twenty-first century, European companies are still very keen on implementing TQM, indicating an obvious intention to shift from ISO 9000 to TQM. To ensure that the shift will occur this time however, the two approaches must be integrated properly. Although both ISO 9000 standards and the TQM/EFQM model have been recently updated or modified, how to best incorporate the two systems remains one of the major tasks of quality management in the future.

Remains to find the answers to the questions: Is TQM just a philosophy, or a useful practical tool in obtaining quality? It is justified the diffused expression of “fad TQM”? While there have been quite a few success stories, for some companies, TQM has become synonymous with failed efforts and wasted resources. Some believe it to be a fad that has lost its relevance in today's world.

An interesting point of view was emphasized by the authors Dale et al (2000), of the paper “Quality is dead in Europe – long live excellence – true or false?”. This deliberately provocative paper challenges the replacement of quality and total quality management by the term “excellence” in the European Foundation for Quality Management (EFQM) excellence model.

Our paper proposes a digraph model, based on the EFQM model criteria. The digraph model can be used as an assessment tool for achieving excellence.

Considerations regarding the EFQM model

No matter how TQM is defined - as a management approach, a philosophy, a tool – its' main purpose is to obtain the business performance. The excellence models based on the TQM principles are set in order to stimulate the adoption of TQM by organizations, offering a set of criteria for evaluating: the premises for TQM implementation and the implications on business results.

There are a large number of TQM models that an organization may choose to apply in order to improve business performances: the EFQM model, the Malcom Baldrige model, the Deming model, the Canadian model, etc.

The EFQM Excellence Model has recently been reviewed and revised to align the framework with current business needs and trends.

Used as a tool for assessment, it delivers a picture of how well the organization compares to similar or very different kinds of organizations. As a management model, it can be used to define aspirations for the organization's capability and performance. EFQM supports organizations in defining what sustainability means, providing approaches for its implementation and ensuring consistency between apparently conflicting responsibilities toward shareholders, employees and society.

Research methodology

The paper proposes a digraph model used as an assessment tool, that allows the understanding of the interactions between the EFQM model criteria, for the systemic analysis and the evaluation of the real organization achievements and needs, because TQM must be seen as a response to real problems. Matrix representation is useful in analyzing the digraph model mathematically and for computer processing. In order to obtain the Quality Index which represents the performance of the system (organization) by a single number, the permanent of the matrix was calculated. The permanent is a multinomial and a standard matrix function, which has been used and defined in combinatorial mathematics by Jurkat and Ryser (1966).

Our research approach consists of developing a digraph model of the interactions between the EFQM criteria. This model is implemented as dedicated software to evaluate the overall system performance.

The software was implemented using the Visual Basic .NET development environment. The weighted digraph is graphically represented. The user can set the weights as sub unitary values representing the influences between criteria. The weight of each criterion is also sub unitary and can be set using the right-side sliders.

All the weights are put in the adjacencies matrix from the lower right side. The system performance is determined based on the permanent of the adjacencies matrix of the digraph.

The digraph model description

The digraph consists of nodes and edges. The nodes (C_i) represent the EFQM criteria and the edges (c_{ij}) represent the interaction between the criteria. C_i indicates the inheritance of factors and c_{ij} the degree of dependence of j^{th} factor on i^{th} . In the digraph c_{ij} is represented as a directed edge from node i to node j . To design the quality digraph, the nine criteria identified are taken into consideration: Leadership, People, Strategy, Partnership & Resources, Processes, Products and Services (treated as Enablers) and People Results, Customer Results, Society Results and Key Results (treated as Results).

The graphical representation of factors given through the digraph, is suitable for visual analysis, but is fairly complex for the nine nodes in the given case. In this form is not suitable for computer processing and for this the digraph is represented in adjacencies matrix form.

The Quality matrix is a 9X9 matrix, which considers all the factors (C_i 's – the degree of accomplishment of the criteria) and their relative interdependencies (c_{ij} 's - the influence of the criterion accomplishment on the degree of fulfillment of other criteria). The Matrix representation and especially the permanent of the matrix provide the quality index as a useful tool in reviewing the current situation and the business performance.

The application of the model

The paper presents the digraph model application on a hypothetical example. The aims are: to calculate the Quality Index, to identify the influence of the accomplishment degree of the EFQM model criteria on the Quality Index, to identify the influence of the criterion accomplishment on the degree of fulfillment of other criteria.

The accomplishment degrees of the criteria are based on the EFQM model established methodology. Unlike the EFQM model, the Quality Index determination doesn't take into account the weighting of criteria.

There were simulated changes of the accomplishment degrees for some criteria in order to discover how the changes influence on the final value of the quality index.

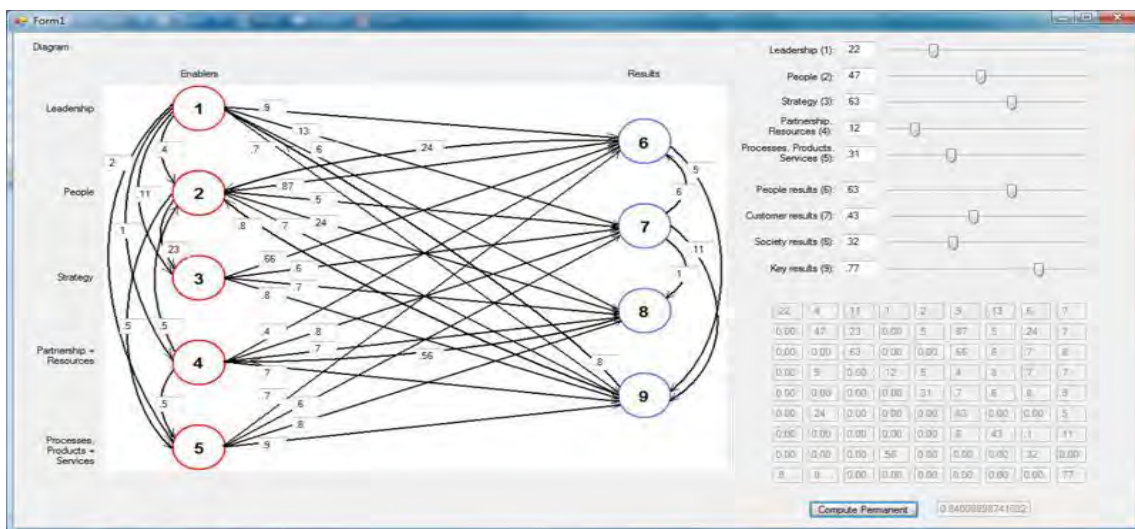


Fig.1. Initial state (S_0)

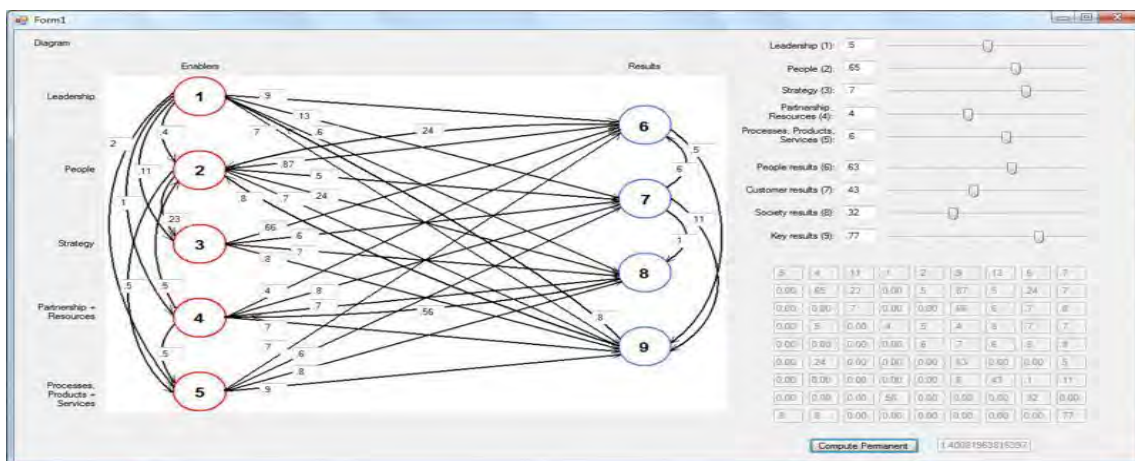


Fig. 2. Raising the accomplishment degrees for Enablers (S_1)

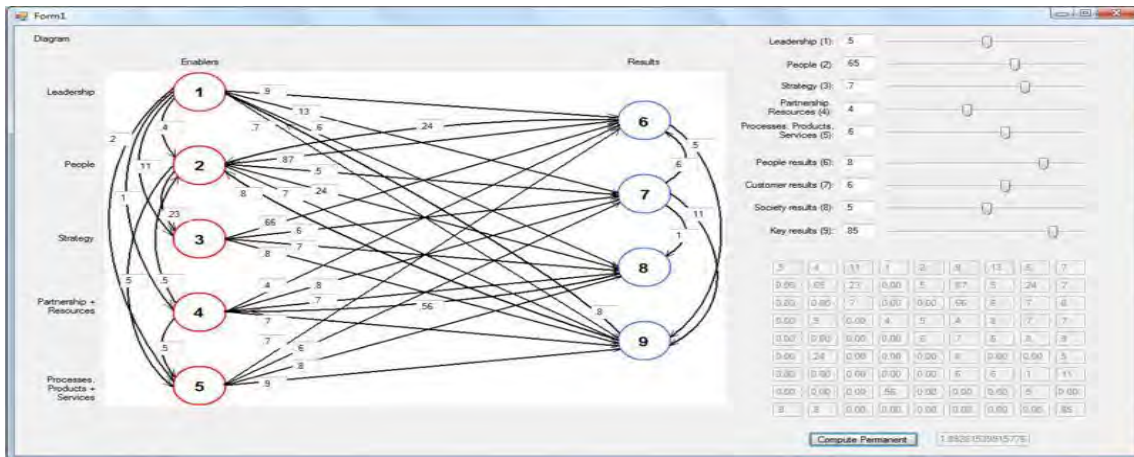


Fig. 3. Raising the accomplishment degrees both for Enablers and Results (S_2)

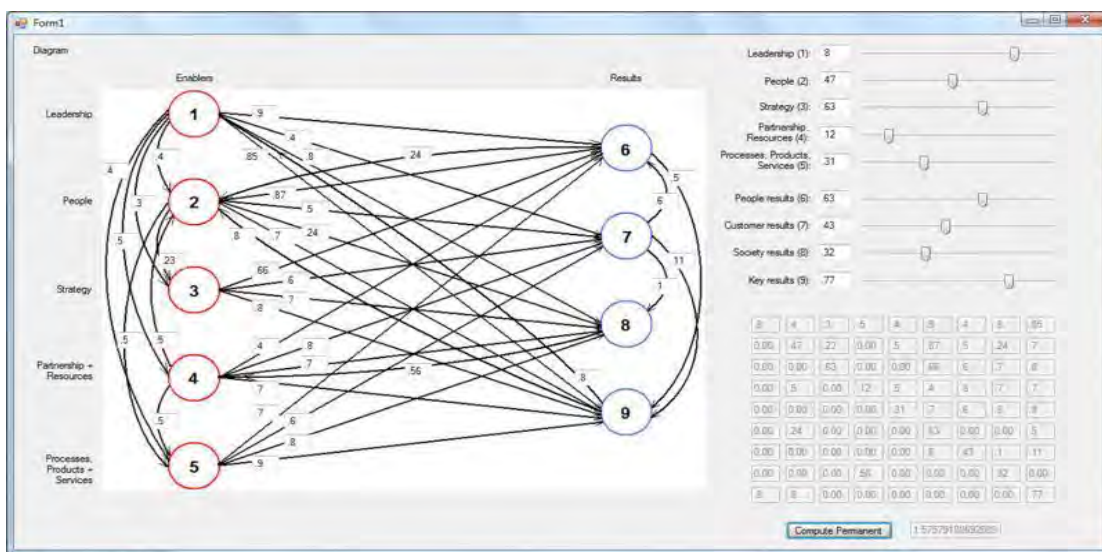


Fig. 4. Raising the accomplishment degrees for Leadership and the influences on other criteria (S_3)

Concluding remarks

The simulation of the four states (S_0, S_1, S_2, S_3) has highlighted the modifications that may occur on the level of the quality index value.

In figure 2 it can be observed that the modification of the Enablers' values (the accomplishment degrees of the criteria: Leadership, People, Strategy, Partnership & Resources, Processes, Products and Services) led to the matrix' permanent growth and to the quality index value of 1.4.

Figure 3 has revealed that the raising of the accomplishment degrees both for Enablers and Results, led to the matrix' permanent growth and to the quality index value of 1.89.

The fourth state (S_3) (Figure 4) highlights the growth of the accomplishment degrees for Leadership and the influences of Leadership criterion on all the other criteria. These changes induce the growth of the matrix' permanent and led to the quality index value of 1.57.

The model attempted to capture the many influences that may occur between criteria.

Certainly, the model can be filled with more influences or may be restricted to a smaller number of influences depending on the system (organization) features.

The Quality Index could be considered as a useful tool in reviewing the current situation, to identify current levels of organizational functioning and areas in need of change. The calculation of the index on the level of the organization provides a comparative basis for future improvement.

As future development of the application there will be taken into account the following directions: providing a mechanism to acquire the criteria interdependences and the degrees of accomplishment of each criterion; providing an expert system, that could interpret the Quality Index values and based on it and on the criteria accomplishment degrees proposing the improvement solutions.

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Assessing Investment Decisions in Process Industries

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Abstract

Investment is a concept which, in specialized theory has not been discussed enough. It is often pointed out that, decision makers can not control the techniques to identify and avoid the risk involved by making investment decisions. In management theory, the decision making is a critical priority for the large companies as well as small and medium-sized ones. Therefore, companies should find and implement innovative solutions in order to create a rigorous system of values or principles for decision making. The problem that this paper tackles is the direct selection of Decision Analysis Software (Monte Carlo simulations with @Risk Software), aiming to select the decision that is more appropriate for the purposes of an organization and that provides larger revenue to the company.

Key words: *risk, investment decisions.*

Introduction

Risk is the possibility to expose yourself to loss, and its determination is based on an extensive experience or informations which allow performing certain estimations of the likelihood of its consequences. In a general approach, risk means hazard, the probability of any eventual loss or a possible loss which, through a clear strategy, we're trying to prevent or to mitigate.

Risk is also defined as the perceived extent of possible loss. Different people will have different views of the impact of a particular risk – what may be a small risk for one people, may destroy the livelihood of someone else.

In process industries, investment decisions are often complex, multi-faced, and involve risk and many different priorities or objectives – presenting exactly the type of problem that behavioral decision research shows humans are typically, quite bad at solving, unaided. Most managers, when confronted with such an investment problem, will attempt to use intuitive or heuristic approaches to simplify complexity until the problem seems more manageable. In the decision making process, important information may be lost, opposing points of view may be discarded, elements of uncertainty may be ignored – in short, there are many reasons to expect that, on their own, managers will often experience difficulty making informed, thoughtful choices about complex issues involving uncertainties and value tradeoffs.

Decision Making Process

Decision making is a process, involving a sequence of activities that starts with recognition of a decision problem and ends with recommendation for a decision. The quality of the decision depends on the sequence and quality of activities that are carry out. There are many processes and techniques to improve decision-making and the quality of decisions. In most managerial problems, the effect of a decision depends on a large number of random factors; also, the number of possible values for each factor may be very large and infinite. It follows that there can be very large or infinite combinations affecting the effect of a decision and, therefore, estimate the

probability distribution for possible values of a management decision is a difficult issue. A manager can not eliminate all risks if future results are influenced by random factors, but it's in his power to reduce the risk to levels that make it acceptable. Investment decisions, typically, involve issues like these:

- uncertainty - many facts may not be known;
- complexity - you have to consider many interrelated factors;
- high-risk consequences - the impact of the decision may be significant;
- alternatives - each has its own set of uncertainties and consequences;
- interpersonal issues - it can be difficult to predict how other people will react.

With these difficulties in mind, the best way to make a complex decision is to use an effective process. Clear processes usually lead to consistent, high-quality results, and they can improve the quality of almost everything we do. According to Kaye (2006), to identify the best investment decision, we must perform the following steps. They involve:

- knowing the economical society background;
- determining our goals and objectives;
- figuring out the characteristics we are looking for in an investment;
- determining the variables and the range of variables that are appropriate;
- running the simulation and rerunning it as needed;
- making a qualitative assessment, making an investment decision;
- following up and keeping tabs on the performance and recent news about investments.

Before investors decide to put money in an investment, they should have a clear idea about what they want the money to be used for in the future.

Monte Carlo Simulation* (MC)

Risk management includes identifying the sources of risks, measuring them, and controlling or hedging them. Monte Carlo simulation has been implemented widely in practice to compute risk measures of many activities.

There are many things that faster computers have made possible in recent years. For scientists, engineers, statisticians, managers, investors, and others, computers have made it possible to create models that simulate reality and aid in making predictions. One of the methods for simulating real systems is the ability to take into account randomness by investigating hundreds of thousands of different scenarios. The results are then compiled and used to make decisions. This is what Monte Carlo simulation is about.

As pointed out by Evans (1998), a Monte Carlo method is a technique that involves using random numbers and probability to solve problems. The advantage of applying this simulation comes from the fact that the expected scenarios based on predicted situations, can be determined with a high degree of probability. This simulation can be used successfully in various fields of chemistry, nuclear physics and industries,

where a better appreciation of the actual likelihood of obtaining certain results such as profitability, tolerances, failures, for example, is required. Simulation is an analytical method designed to mimic a real situation when other methods of analysis are too mathematically complex or too difficult to replicate. For each variable will define a set of possible values and a distribution law. Distribution type depends on the characteristics of the variable concerned.

MC steps:

1. Modeling scenario, determining the system of equations for the primary variables, while describing the interdependencies between them;
2. Establishing the distribution of each variable, in a subjective manner or based on historical data. This should be preceded by a sensitivity analysis to determine which the variables with greatest influence on indicators are;
3. Generating a random set of numbers given by the law of distribution of each variable. Based on the values generated we will calculate other indicators/ratios.

We can use MC whenever we need to make an estimate, forecast or decision where there is significant uncertainty, otherwise our estimates or forecasts could be way off the mark, with adverse consequences for our decisions.

Computer simulation has to do with using computer models to imitate real life or make predictions. When we create a model with a spreadsheet in Excel, we have a certain number of input parameters and few equation that use those inputs to give us a set of outputs (or response variables). This type of model is usually deterministic, meaning that you get the same result no matter how many times you rerun the simulation.

The Scenario

A company needs to know how profitable it will be to market their new product, realizing there are many uncertainties associated with market size, expenses, and revenue.

We will use MC with @Risk Software to estimate profit and evaluate risk, and to select the right decision.

1. Determining the system of equations.

$$\text{Profit} = \text{Income} - \text{Expenses}$$

$$\text{Income} = S * P, S - \text{number of sales per month}, P - \text{profit per sale};$$

$$S = L * R, L - \text{number of leads per month}, R - \text{conversion rate};$$

$$\text{Income} = L * R * P$$

$$\text{Expenses} = H + L * C, H - \text{fixed overhead}, C - \text{cost of a single lead}$$

$$\text{Profit} = L * R * P - (H + L * C)$$

2. Generating Random Inputs

For this example, we're going to use a Uniform Distribution to represent the four uncertain parameters. The inputs are summarized in the table shown below.

Input Values (input)				
	Nominal	Min	Max	Stochastic
Leads per Month (L)	1500	1200	1800	1589,248142
Cost Per Lead (C)	€ 0,50	€ 0,20	€ 0,80	€ 0,23
Conversion Rate (R)	3,0%	1,0%	5,0%	3,772%
Profit per Sale (P)	€ 50,00	€ 47,00	€ 53,00	51,84 €
Overhead per Month (H)	€ 800,00			

Fig. 1. Generating Random Inputs

3. Evaluating the Model

We put the equation in another column next to the inputs.

4. Run the simulation

We don't need to write a huge macro for this example in order to iteratively evaluate our model. We simply copy the formula for profit down 5000 rows, making sure that we use relative references in the formula.

5. Analyze the results using histograms.

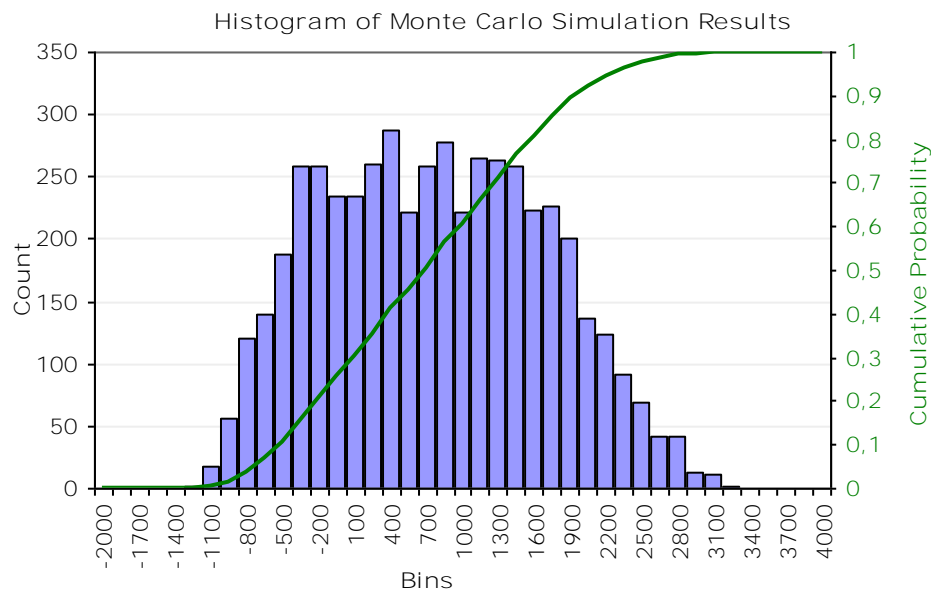


Fig. 2. Histogram of Monte Carlo Simulation Results

We glean a lot of information from this histogram:

- the profit will be positive, most of the time;
- the uncertainty is quite large, varying between -1000 to 3400;
- the distribution looks like a normal distribution.

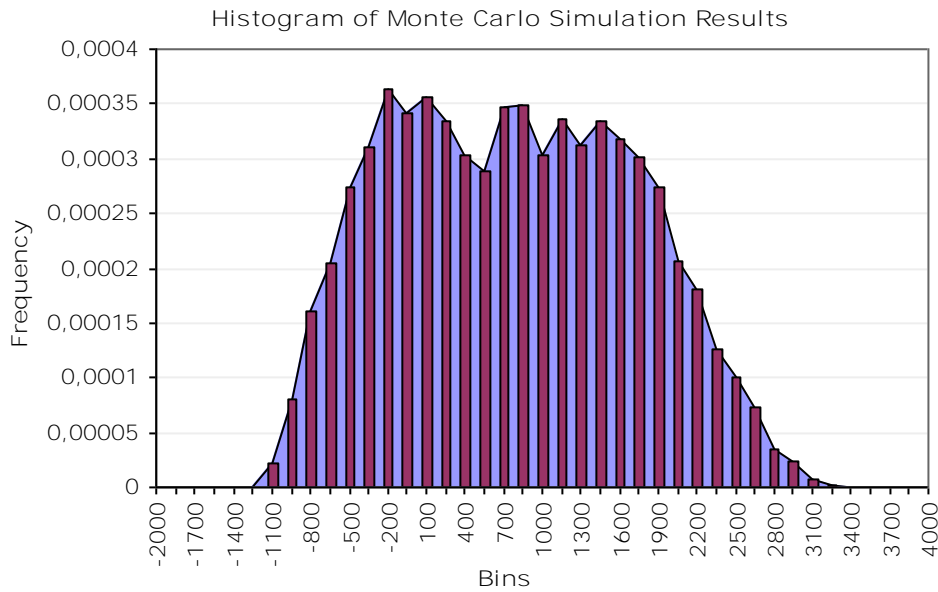


Fig. 3. Histogram of Monte Carlo Simulation Results

The simulation shows that the product will have a great impact to the market.

Discussion and conclusions

As the models become more and more complicated and also more and more realistic, Monte Carlo simulation often becomes the only method to evaluate the prices of derivatives and to estimate the risk measures of portfolios. There is a great need for developing simulation algorithms that are correct and efficient under this new model. In this paper we review some of the recent developments, and we believe there are still many interesting problems yet to be solved.

The benefits of Monte Carlo simulations are: saving time and resources. @Risk Software eliminates the need to run, test, and present multiple spreadsheets. It can also handle dozen assumptions simultaneously, and can establish correlation coefficients among variables. After an investor runs a simulation, the results will be downloaded into a spreadsheet program, so the data can be easily manipulated. The Decision Analysis Software can be practically applied at any decision making level and in any business, economical, or technical area; it can be explained and implemented using plain, understandable terms and concepts.

Notes

* The name Monte Carlo simulation comes from the fact that during the 1930s and 1940s, many computer simulations were performed to estimate the probability that the chain reaction needed for the atomic bomb would work successfully. The physicists involved in this work were big fans of gambling, so they gave the simulations the code name Monte Carlo.

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The Project Teams in the Universities of Iași

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Abstract

Purpose – This paper explores teamwork in the universities of Iasi. This paper aims to investigate: the development of team project in the last years; the individual's behavioral tendency for project team's members regarding the Belbin model; the current level of teams development, regarding the Tuckman model; to identify if there is a connection between these two models.

Methodology/approach Starting point of approach was reviewing literature for defined concepts. As a basic method to get an evaluation of the facts of project teamwork in the universities of Iasi, was using questionnaires to meet predetermined objectives. The subjects were five project teams from two universities of Iasi. Have been applied two types of questionnaires, one based on Belbin's model(56 questions) and another based on Tuckman's model(32 questions). The objective of the first questionnaire was to identify the individual's behavioral tendency of project team's members. The teams had 4, 6 or 8 members.

Findings The members' behaviors are very important for performance project teams of Romanian universities. Whilst some Team Roles are more "high profile" and some team members are more agitated than others, each of the behaviors is essential in getting the team successfully from start to finish. The key is balance. For example, a team with lowest score for Plant may struggle to come up with the initial spark of an idea with which to push forward. However, with no Shaper or Coordinator the team ambled along without drive and direction, missing deadlines. With too many Shapers or Coordinators, within the team can be many conflict situations.

Research limitations/implications – Improve quality management in higher education in Romania, a better ranking of Romanian universities compared to other universities abroad.

Practical implications – This research will contribute to a better formation of project teams

Originality/value – A comparative analysis between The Belbin Model and The Tuckman Model; analysis individual's behavioral tendency for project teams in the universities of Iasi; analyzing the development of project teams in the universities of Iasi.

Key words: teamwork, development, university.

1. Introduction

Acknowledgement This paper was realised with the support of EURODOC "Doctoral Scholarships for research performance at European level" project, financed by the European Social Fund and Romanian Government.

The literature indicates the importance of teamwork to the success of innovative projects. The effectiveness of teams varies greatly, and considerable research has been devoted to seeking the formula for success. If we observe carefully the teams, find that their members have well-defined roles. This observation is relying on effort and managers to identify and assign each member, according to the role. It is saying often rightly "No person is perfect, but a team can be!" While it is relatively easy to concentrate on, and relate to, the basic elements such as age, ethnic origin, and educational background, the more important issues such as the team personalities blend, and more especially the way the people come together as a combination, have rarely been explored. Several authors and theorists offer suggestions for improving the effectiveness and productivity of teams in the workplace (Brooks, 1990; Goodman, 1988; Hemingway, 1991). Other literature suggests that the way to cope with, and capitalize on the team-situation is to engage in team-building work (Brooks, 1990; Goodman 1988). Consistent with this view, Bales (1950), found that teams needed

both goal-directed members, and other members to ensure harmony within the team. Other early work in this area by Benne and Sheats (1948; cited in Adair, 1986) led to the development of a role behaviors classification scheme which described 12 tasks and seven group maintenance roles operative in group performance. With respect to task process and maintenance skills, Torrington et al., (1985), have suggested that for effective team functioning both task-oriented, and social/emotional oriented behaviours are necessary. The research of Benne and Sheats appears to have inspired the more recent development of Belbin's team-role theory. He took the further step of making a link between the team roles necessary for effective team functioning and preferred behaviours (Belbin, 1981, 1993 and Belbin et al., 1976).

Like any other life form, teams are developed and changed and what is important at some point in their development is later replaced by new influences.

Development teams must be analyzed to understand teams. Bruce W. Tuckman produced one of the most quoted models of group development in the 1960s. We consider his contribution and the model's continuing use.

2. THE BELBIN MODEL

The Belbin Team Inventory, also called the Belbin Self-Perception Inventory or the Belbin Team Role Inventory, is an assessment used to gain insight into an individual's behavioural tendency in a team environment. The Belbin Team Role Inventory assesses how an individual behaves in a team environment. It is therefore a behavioural tool, subject to change, and not a psychometric instrument. Belbin's work also looks at the idea of complementary roles in a team, with different individuals having measurable preferences for working within teams in different classifies of ways. The model similarly, promotes the idea of an effective team as one that has a full complement of roles active within it. Belbin initially identifies the roles of company worker, chairman, shaper and plant and resource investigator. Further research he conducts suggests that this team is still incomplete, and he adds: "In fact the balance is less complete than appears at first sight" (Belbin, 1981, p. 68). To these five roles, he adds three more, an evaluator, to judge the real merits of any ideas, the teamworker to support team members and finally the finisher who ensures that actions is followed through to completion. The Belbin Inventory scores people on how strongly they express traits from eight different Team Roles.

- Implementer (IM)- Well-organized and predictable. Takes basic ideas and makes them work in practice. Can be slow.
- Shaper - Lots of energy and action, challenging others to move forwards. Can be insensitive.
- Finisher(FI) - Reliably sees things through to the end, ironing out the wrinkles and ensuring everything works well. Can worry too much and not trust others.
- Plant(PL) - Solves difficult problems with original and creative ideas. Can be poor communicator and may ignore the details.
- Evaluator (EV)- Sees the big picture. Thinks carefully and accurately about things. May lack energy or ability to inspire others.
- Coordinator (CO)- Respected leader who helps everyone focus on their task. Can be seen as excessively controlling.

- Team worker(TW) - Cares for individuals and the team. Good listener and works to resolve social problems. Can have problems making difficult decisions.
- Investigator (IN)- Explores new ideas and possibilities with energy and with others. Good networker. Can be too optimistic and lose energy after the initial flush.

3. THE TUCKMAN MODEL

Model best known and most widely used for team development (Tuckman, 1965) involves four levels:

1. Forming - The team meets and learns about the opportunity and challenges, and then agrees on goals and begins to tackle the tasks. Team members tend to behave quite independently.

2. Storming - The team addresses issues such as what problems they are really supposed to solve, how they will function independently and together and what leadership model they will accept.

3. Norming - During this phase, team members begin to trust each other. Motivation increases as the team gets more acquainted with the project.

4. Performing - By this time they are motivated and knowledgeable. The team members are now competent, autonomous and able to handle the decision-making process without supervision.

Not all groups following the scheme proposed by Tuckman. It can, in some cases, resumption of steps to be taken gradually, at various levels.

4. COMPARISON OF BELBIN AND TUCKMAN

For teams to follow the model proposed by Tuckman, firstly, must follow the process for selecting members' fit and proper composition of the team. Regarding team composition, Belbin say that teams work better if there is a balance of primary roles and if team members know their roles, work to their strengths and actively manage weaknesses. Analyzing these two models I would say that there is a connection between them (see Figure 1).

On examination of the figure1, between models seems to be a connection. One might ask question like "The Belbin model influences really The Tuckman development model?" If this is the case then on might ask questions like " How much should the team to depart from Belbin's model to significantly influence team's development?"

Given all the above, the research question and focus for this research are: If we identify the team's composition and also we identify the team's current level of operation could we see a connection between these two models?

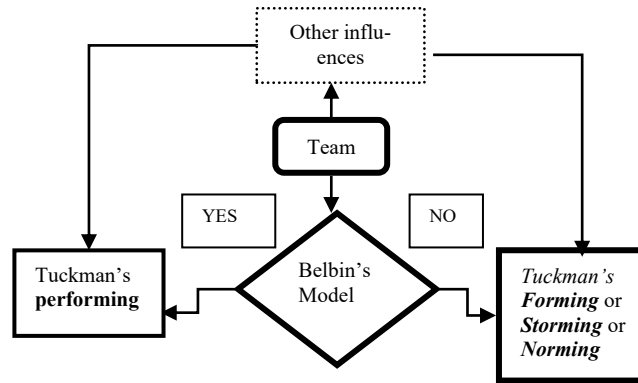


Fig. 1. Connection between models - Belbin and Tuckman

The aims and objectives of this article then follow on, logically as:

- To identify the individual's behavioral tendency of team's members regarding the Belbin's model;
- To identify the current level of teams' development, regarding the Tuckman's model;
- To identify if there is a connection between this two models.

5. THE STUDY

The subjects were five project teams from two universities of Iasi. The teams had 4, 6 or 8 members. Most of the subjects were professors and they worked in a project team before. Some of the subjects were PhD students and they didn't work in a project team before. Most projects were research projects but some of them were development projects. Three of the five teams studied were from technical field and the other two teams were from the economics field.

To quantify this research have been applied two types of questionnaires, one based on Belbin's model (56 questions) and another based on Tuckman's model (32 questions). The objective of the first questionnaire was to identify the individual's behavioral tendency of project team's members. In this study it will be considered that each team's member must have individual's behavioral tendency departed from the others.

The objective of the second questionnaire was to identify the current level of project teams' development. The questionnaire is based on the classification of team in one of team's development levels, according to Tuckman's model (Forming, Storming, Norming, and Performing).

To interpret the results, obtained on the basis of questionnaires, will be analyzed in turn each of the five teams investigated.

Table 1 and figure 2 are the research results for one of the 5 teams studied, which is conventionally named Team 1.

Table 1. Belbin's team-role 1

	M1	M2	M3	M4	M5	M6	M7	M8
IM	10	18	8	10	15	16	11	11
CO	10	11	5	10	5	11	9	6
SH	8	7	16	6	13	13	9	5
PL	12	8	10	11	12	11	14	17
IN	10	8	5	6	8	7	8	10
EV	8	10	4	12	9	8	8	9
TW	11	7	15	10	8	5	8	10
FN	8	2	12	8	4	3	8	6

Table 1 illustrates the result of research based on questionnaire Belbin's team-role, respectively the preferred roles of each Team1's member.

Figure 2 illustrates the result of research based on questionnaire Tuckman.

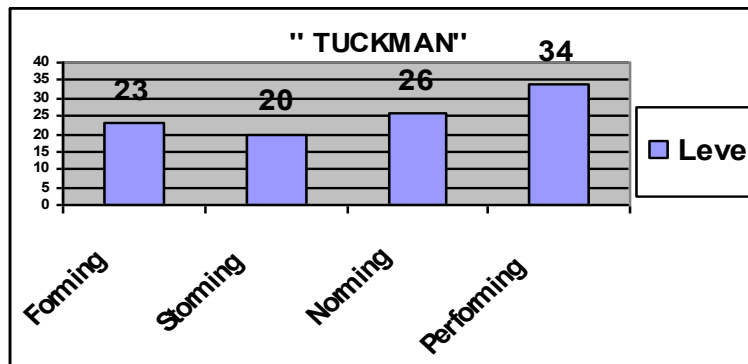


Fig. 2. Tuckman's development 1

The largest of the four scores indicate a perception that members have on the level by passing team. A score of 32 or higher is a strong indication of progress by passing team. The lowest score possible for a level is 8 (almost never), while the highest score possible for a level is 40 (almost always).). Figure 3 shows that the highest score is assigned level performing (34), which stand out significantly from the other three levels.

As shown in Table 1, the team contains an unusually strong indication of CO and SH, which, is not a very positive quality for a team to display. Member 1,2, 3, 4,5 and Member 6 all show strong leadership indication. The team contains a strong indication of plants, which, is a very positive quality for a team. This analysis concerns whether the team covers all of the complement of Belbin's roles but it considered that the model's results differ from the Belbin's model because generally members should not have scores for each role so closely.

We see that although the model's results differ from the Belbin's model considered (table.1), team is in Tuckman's Performing level (fig.2). We can say that the model is not significantly deviated so as to prevent team to reach the performance.

Table 2. Belbin's team-role 2

	M1	M2	M3	M4	M5	M6
IM	7	11	9	10	18	10
CO	14	14	7	10	11	10
SH	6	11	11	6	7	5
PL	14	4	3	11	2	7
IN	13	6	4	10	8	6
EV	5	5	11	8	10	13
TW	10	12	10	11	9	10
FN	3	7	14	8	2	9

The largest of the four scores indicates that the members' perception is that team is in the Storming level (fig.3). Individual's behavioral tendency for team's members is deviated from the Belbin's model (tab.2). Note that four members have similar tendency.

Almost all members' behavioral tendency contains a strong indication of CO and SH. Seem to be a significant deviation from the Belbin's model to influence the Tuckman's model. The team contains a strong indication of TW, which, is a positive quality for a team. There is not a strong plant influence on the team, this may indicates a poverty of ideas.

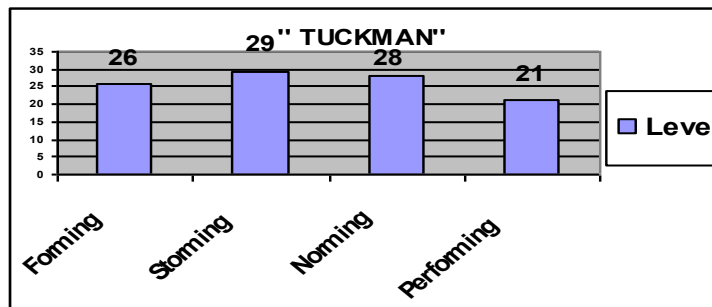


Fig. 3. Tuckman's development 2

This team seems to be in phase Forming (fig.4). Seems to be a heterogeneous team, each individual's behavioral tendency differ for each member (tab.3). This team shows coverage of the complement of Belbin roles, which is certainly a very good indication. If this team is newly formed, it may say that this team can follow the Tuckman's development model.

Table 3. Belbin's team-role 3

	M1	M2	M3	M4
IM	12	0	12	15
CO	8	10	13	7
SH	8	15	13	17
PL	10	15	3	2
IN	6	20	0	4
EV	12	0	11	13
TW	8	10	9	9
FN	4	5	16	10

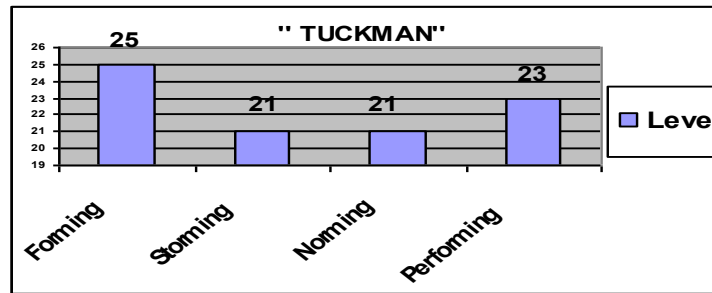


Fig. 4. Tuckman's development 3

We can see again that each member seems to have different individual's behavioral tendency (tab.4). This team is in Tuckman's Performing level (fig.5). Further, there could be leadership conflicts on the team because all members indicate CO roles and SH roles. One final part of this analysis it considered the team covers all of the Belbin's roles but not the same with the Belbin's model. Generally members should not have scores for each role so closely.

Table 4. Belbin's team-role 4

	M1	M2	M3	M4
IM	3	0	12	15
CO	7	10	13	7
SH	13	15	13	17
PL	8	15	3	2
IN	5	20	0	4
EV	4	0	11	13
TW	7	10	9	9
FN	12	5	16	10

For the last team studied two of the scores (the largest, fig.6) are the same, probably the team goes through a process of transition from one level to another (from Storming to Norming).

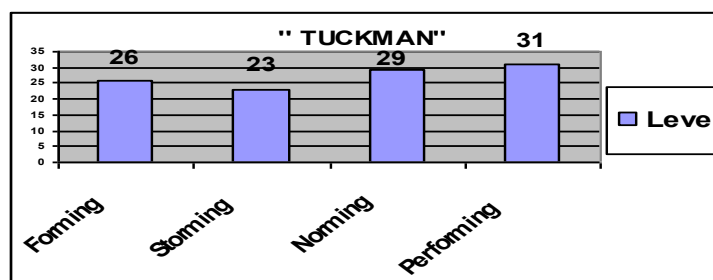


Fig. 5. Tuckman's development 4

This model seems to be the most similar with Belbin's model (tab.5). Members' individual behaviors are detached from a member to other member. Unfortunately, there is not a strong plant influence in this team.

One final consideration for this team is the grown number of EV, which indicate in generally a positive behavioral tendency to have present on a team.

Table 5. Belbin's team-role 5

	1	2	3	4
IM	7	6	12	15
CO	6	5	13	7
SH	11	1	13	17
PL	7	8	3	2
IN	7	14	0	4
EV	10	8	11	13
TW	10	9	9	9
FN	11	14	16	10

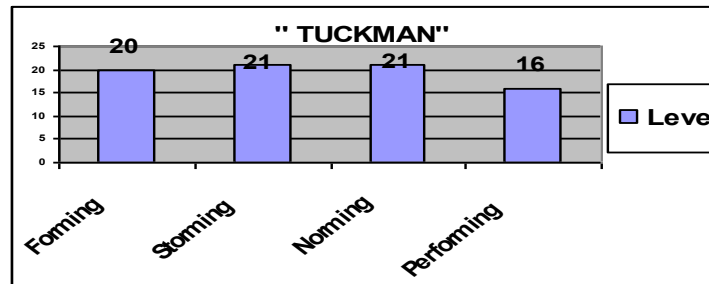


Fig. 6. Tuckman's development 5

If considered that to achieve a good balance there should be: One Coordinator or Shaper (not both) for leader, A Plant, A Evaluator, One or two Implementer, Team worker, Resource investigator or Finisher, then it may make a comparison (table 6):

Table 6. "The Belbin's model"

MEMBER	"The Belbin model"					
	T0	T1	T2	T3	T4	T5
CO	1/0	2	2	1	1	1
SH	0/1	1	2	1	1	1
PL	1	1	1	1	1	1
EV	1	1	1	1	1	1
IM	2-1	1	1	1	1	1
TW	2-1	1	1	1	1	1
IN	2-1	2	1	1	1	1
FN	1	1	1	1	1	1

In the Table 6 we can see a comparison between "the good balances" considered (T0) and each team analyzed (T1, T2...T5). It can see a deviation higher in the first two teams studied than the model established. There are too many Coordinators and Shapers. Perhaps that is why the team members consider the Team2 is found in Storming level (tab.2).

6. DISCUSSION AND CONCLUSIONS

Limits of research are: limiting the validity of conclusions from the case studies presented, the small number of subjects is inappropriate presentation of statistical significance of results; were not taken into consideration other factors influence the development teams; there was possibility that respondents were not honest in the answers given in surveys.

Future research may be considered include the analysis of many universities in several regions of the country. The study can be improved through direct research teams (interview, observation, experiment).

Considering that research objectives have been achieved (tab.1-5; fig.2-6), it concluded:

- Two project teams in the universities of Iasi are in the Performing level (fig. 2; 5) and other two seem that will achieve this.
- The members' behaviors (tab1; 4) are very important for performance project teams of Romanian universities (fig.2; 5).
- Whilst some Team Roles are more "high profile" and some team members are more agitated than others, each of the behaviors is essential in getting the team successfully from start to finish (tab3; tab.4).
- The key is balance (Tab.6). For example, a team with lowest score for Plant (tab.5) may struggle to come up with the initial spark of an idea with which to push forward. However, with no Shaper or Coordinator the team ambled along without drive and direction, missing deadlines. With too many Shapers or Coordinators (tab.2), within the team can be many conflict situations (fig. 3)

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The Place and the Role of the Construction Engineer in Project Management

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Abstract

Purpose: - Building and construction continue to represent an important activity in the development of humankind. In the past 20 years, the Romanian construction industry has gone through several stages, transitioning from monopoly to liberalisation, and implicitly from exclusive state ownership to mostly private ownership. If the investment projects in this sector are to be legitimate and sustainable, the individuals that manage them must have a thorough training as Project Managers as well as construction engineers. The current stage of the construction industry development in Romania requires an internationally recognised management framework, such as the PMBOK Guide (A Guide to the Project Management Body of Knowledge). This study highlights the effectiveness of using modern management tools in construction projects in the current Romanian construction industry.

Methodology/approach: - All project managers' goal is to finalise the project in the best possible conditions, avoiding failure as much as possible. Failure in a construction project means negative effects on the environment, additional costs for dismantling, wasted financial and material resources; this alone should be a great incentive for project managers to eliminate as many as possible of the errors that cause failure. Starting from this idea, this study outlines and highlights the features of the construction project, as well as the implications concerning the construction engineer, using the PMBOK guide as a base. This study carries out a review of the particulars that set construction projects aside as a separate category. The analysis performed is based on current information concerning the construction market, and this adds to its relevance.

Practical implications: - The growing interest for infrastructure and construction is a result of the natural aspiration for development and for reaching European standards. The latter issue requires that the industry assimilates specific technologies, as well as modern tools for monitoring and analysing the management of the projects. In Romania, once foreign investment was attracted, established management strategies were put into practice. In the past 20 years, the process has also been driven by the manager's desire to improve their knowledge and skills in the interesting and challenging domain of constructions.

Originality/value: - The originality of the study resides both in its starting point as well as in the way the management features are detailed from a construction industry perspective.

Key words: project management, construction industry, PMBOK Guide;

Introduction

Managerial thinking emerged when mankind began setting goals and using resources to reach them. Putting ideas into practice is done most of the times using plans and designs and working in projects. Construction projects have always been and still are a constant challenge to man. They drive development by engaging impressive and diverse categories of resources, and the human factor has a crucial role.

Originating in the USA, the concept of *project management* was quickly adopted in Europe. The first attempts to standardise the practices belong to the UK Chartered Institute of Building (1979).

In 1983, the members of the Project Management Institute (PMI) gathered for the first time the elements that would become the foundation for the *Guide to the Project Management Body of Knowledge*. The first edition of this standard was issued in

1994, reaching its fourth edition in 2008. The PMBOK Guide is recognised as a standard for project managers in all domains of activity.

In Romania, PMI has been present for the past eight years, and in this interval the profession of Project Manager has shown its importance and its role in every domain. As a newly graduated constructions engineer I intend to stress the importance of this activity in the Romanian construction industry.

Starting from the examples of developed countries in the European Union, in Asia and the Americas, we extract and assimilate in the construction sector essential practices for the proper management of projects. The development stage Romania has reached entails the realisation of new, advanced and sustainable projects, the proper running of already implemented projects and the improvement of older ones. In the context of the current economic downturn, the correct management of all the resources involved in construction is essential. In these circumstances, this article aims to underline the manner in which construction engineers can improve the management of a project by using their engineering skills and abilities.

Projects in constructions – particularities

The products of the construction industry – refurbishment works, dismantling operations, new buildings, rehabilitation works, reinforcement and extensions of buildings – do not follow the classic flow of the industrial process used in other sectors. For a stable home, we do not turn to a factory but instead to a building or a housing complex.

In literature, these particularities are usually presented thus:

- **the finished product (construction objects) are fixed (bound to the ground), while and the production process is mobile;** Suggested solution: increase the degree of industrialisation of construction work, in parallel with aiming for execution according to the strictest standards.
- **the production process in construction takes place, as a rule, outdoors;** Suggested solution: decrease the weight of human processes on building sites by using advanced materials or by scheduling the works in such a way that winter works only take place indoors.
- **the length of the production cycle is relatively high compared to manufacturing cycles;** Suggested solution: rigorously plan the works, in parallel with using advanced machines, materials and tools, well-trained workforce, as well as by increasing the degree of industrialisation.
- **great diversity of works in construction;** Suggested solution: use modern models of management and organisation (using the PMBOK Guide as international standard), as well as ensuring appropriate training in civil engineering.
- **great complexity of production process** – a particularity which further complicates the management and organisation activity. Suggested solution: use cutting-edge software and plan activities in such a manner that the benefits are maximised – a decision that needs to be made by the construction engineer.

- **the lifespan of construction objects is very long;** Suggested solution: design surfaces and volumes in modules, ensure multi-functionality for the buildings by using mobile partitions.
- **in construction, each finished product is virtually unique;** if just one of the design parameters is changed, the entire design process is changed, causing additional costs that the investor needs to cover; most times, these changes are caused by natural factors, which cannot be controlled.
- **the large weight of construction objects;** those who design and execute works must bear in mind that at the end of the building's lifespan, all the materials that went into its construction will become waste materials.

The construction process, once started, is not a self-regulated mechanism, but instead requires guidance from an expert if the originally devised plan is to be observed. The uniqueness of construction projects, irrespective of their individual complexities, requires a unique effort, for a limited period of time in which complex works are undertaken.

Current stage of management in the Romanian construction industry

The starting point of a project is the formulation of its theme, expressed as its main objective, and establishing the funding source. Depending on difficulty and size, projects may be simple or complex. The next issue that any construction investor examines is profitability. The connection between the two – achieving the established objective according to the legal and quality requirements, and obtaining a profit – outlines the application area of management in construction.

At the time being there are countless projects in development, some of considerable size, with significant budgets. The stakes are high, but we must never overlook the risks, which are anything but negligible.

Romanian's accession to the European Union has forced the Romanian companies working in this domain to adapt to the EU-recognised performance criteria. Their response took the form of organisational measures at all levels: executive and operative, managerial, financial, marketing, human resources, logistics, and, of course, in the organisation and development of Project Management departments. In addition, the traditional organisation of construction companies has changed, being replaced by matrix structures, project structures and composite structures.

According to the PMBOK Guide, the matrix-type organisational structure – Strong matrix Organization – is described by figure 1, the Project Organization by figure 2, and the Composite Organization by figure 3.

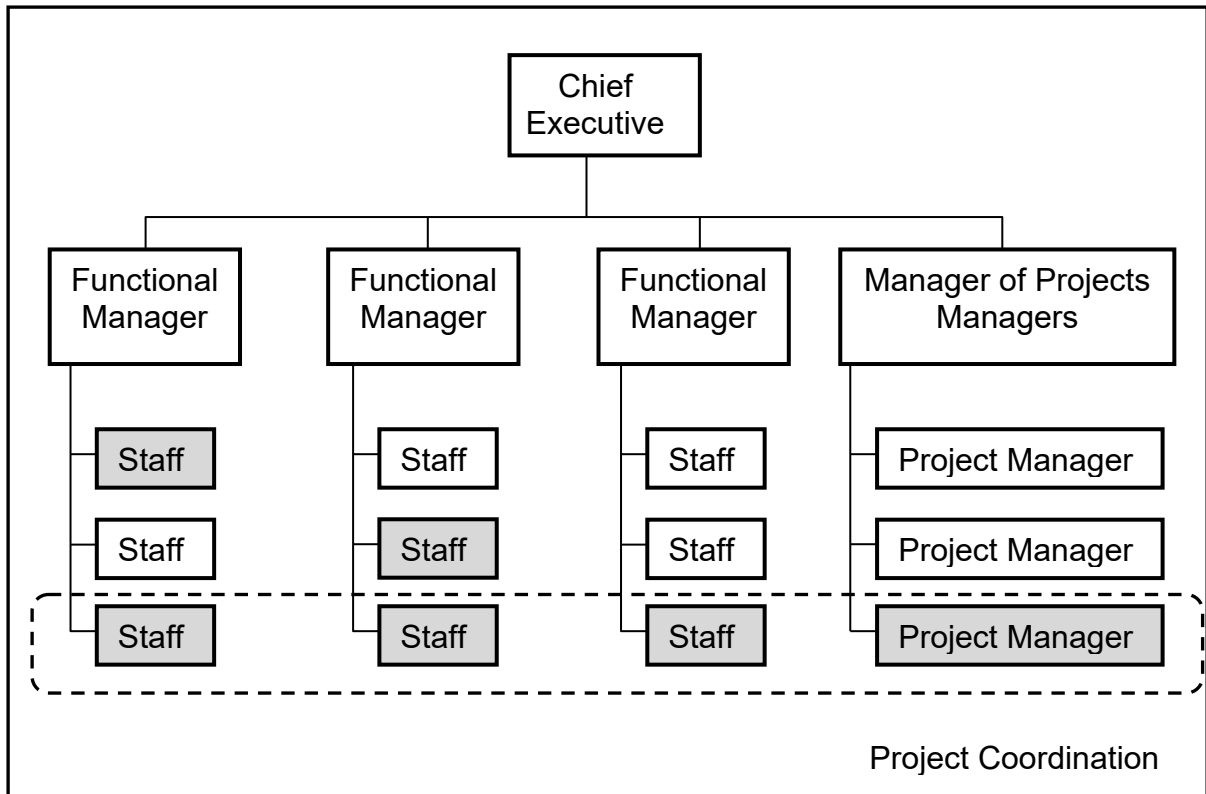


Fig. 1. Strong Matrix Organization [1]
 Gray boxes represent staff engaged in the project activities

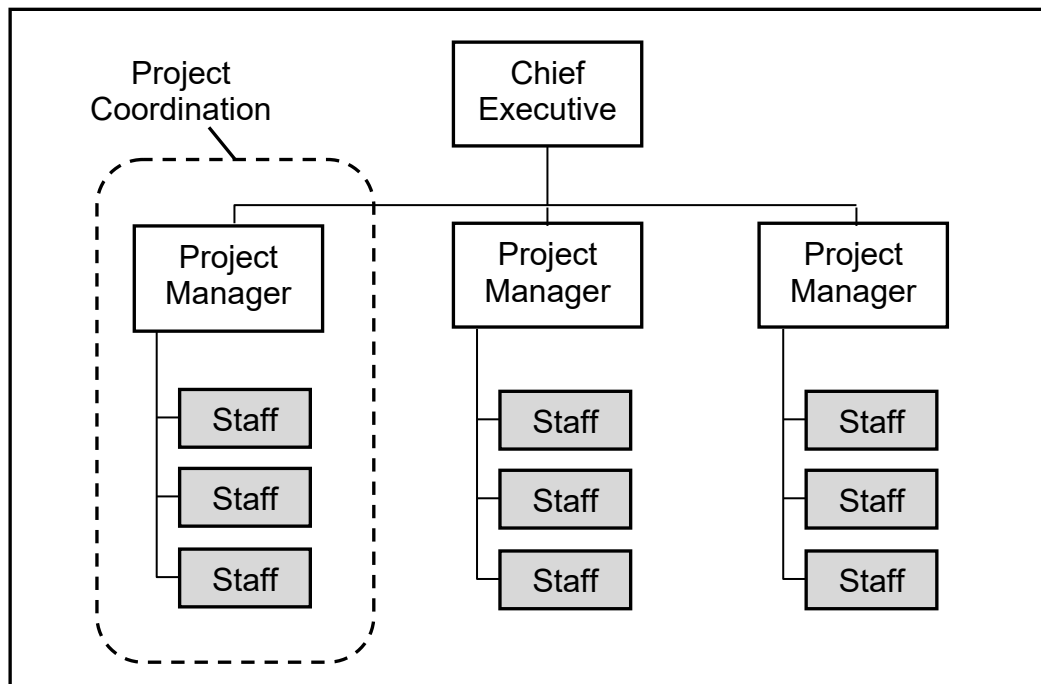


Fig. 2. Projectized Organization [1]
 (Gray boxes represent staff engaged in the project activities)

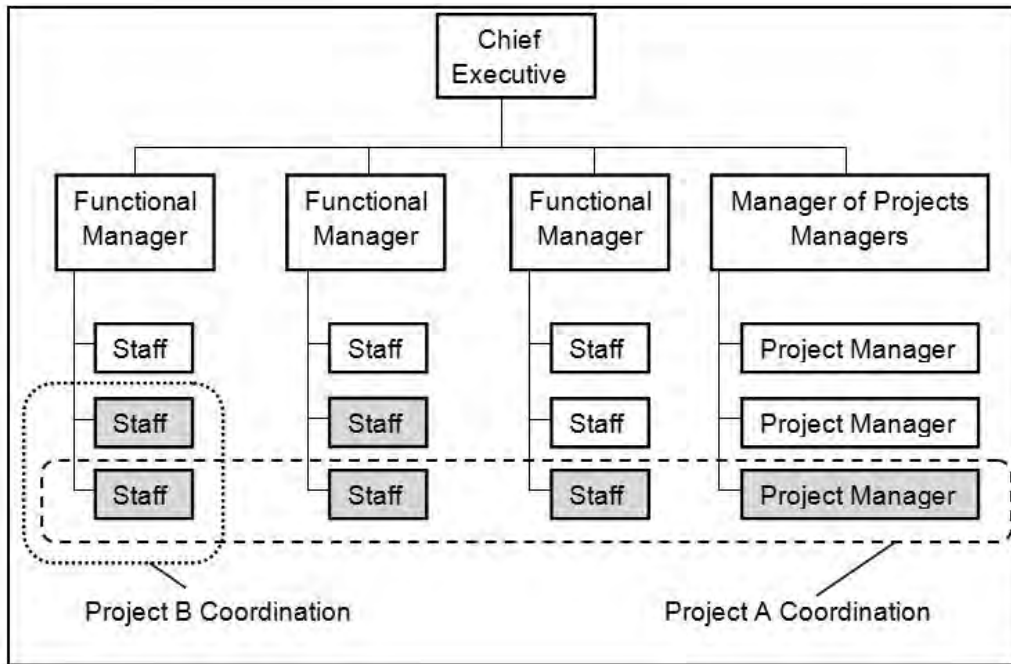


Fig. 3. Composite Organization [1]
(Gray boxes represent staff engaged in the project activities.)

The purpose of this re-design of the organisational structure of construction companies is to meet the specific needs of projects: “scoping”, planning, organisation and control.

The increase in competitiveness in nowadays Romanian construction sector has risen quality standards to EU standards level. This process has been underpinned by the framework structure of Project Management, and this requires the training and professionalization of core PM specialists.

The current economy has shown that carrying out major investment projects through a PM specialised company results in a drop of construction costs by 10%-20%, as well as in an increased quality level of construction products.

Fusing PM processes with the skills of the construction engineer

The PM concept is defined by the standard as “the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. This application of knowledge requires the effective management of appropriate processes.” [1]

The PM concept in construction projects is defined as “planning, organisation, coordination, control and finalisation of specific works, with the aim of meeting the investor’s requirements concerning the creation of a product that is viable from an operational and financial point of view, while observing quality standards, sustainability, cost requirements and agreed execution deadlines”. [2]

Several organisations take part in the realisation of a construction project: the beneficiary, the investor, the provider of funds, the building contractor, the designer,

the consultant, material suppliers, equipment suppliers, service suppliers etc. Thus, project managers must work with professionals from companies other than their own. Given the fact that the construction domain is a complex one, the PM responsibilities include significant decision-making.

In order to develop leadership skills, project managers must insist on the following:

- **ability to establish objectives** – all projects start from the establishment of objectives and deadlines. Objectives must be SMART – specific, measurable, attainable, realistic and timely. After the objectives have been established, it is crucial to devise a roadmap for the project (see figure 4), so that each member of the project team knows what needs to be done and when.

- **enthusiasm and passion for their work** – the project manager must be a constant source of enthusiasm and passion. Passion is an engine that feeds on trust and generates trust by driving things to success. Therefore it is important that project managers prove enthusiasm for reaching objectives.

- **focus** – if a project manager wants his team to follow him, it is important that while the project is running to prove an unswerving focus on reaching the project objectives. It is also important that the project manager is the most hard-working and determined member of the team, thus providing an example to the rest of the team members.

- **belief in strong positive values and identification with such values** – a strong and inspiring leader must believe in strong positive values.

- **adaptability of leadership style** – a project manager should meditate on his/her leadership style and on the way he/she wants to be seen by the others, especially by the rest of the management team.

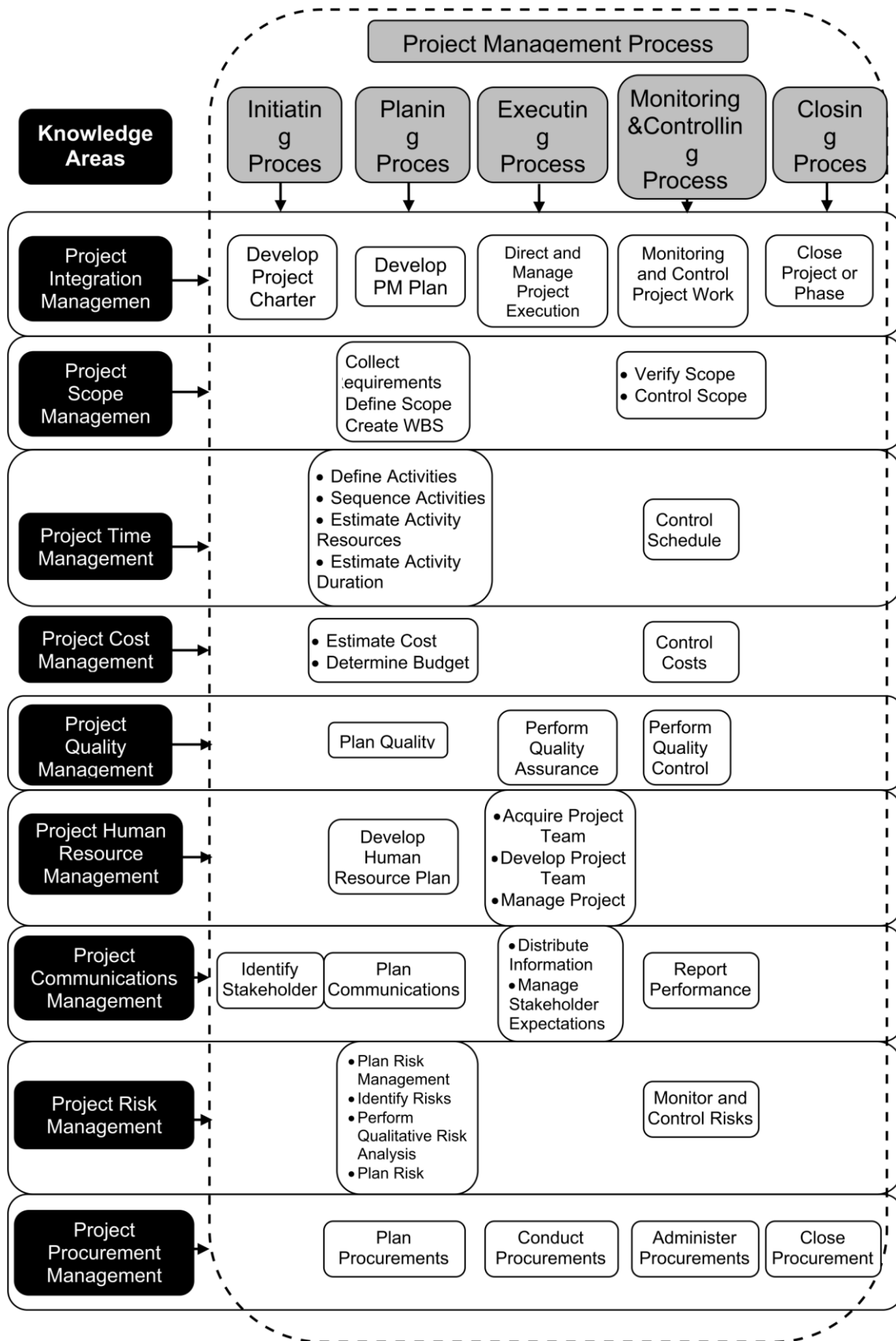


Fig. 4. Project Management Process Groups and Knowledge Areas Mapping [1]
 According to the PMBOK Guide, Project Management Processes are grouped under five categories known as *PM Process Groups*, as shown in figure 5:

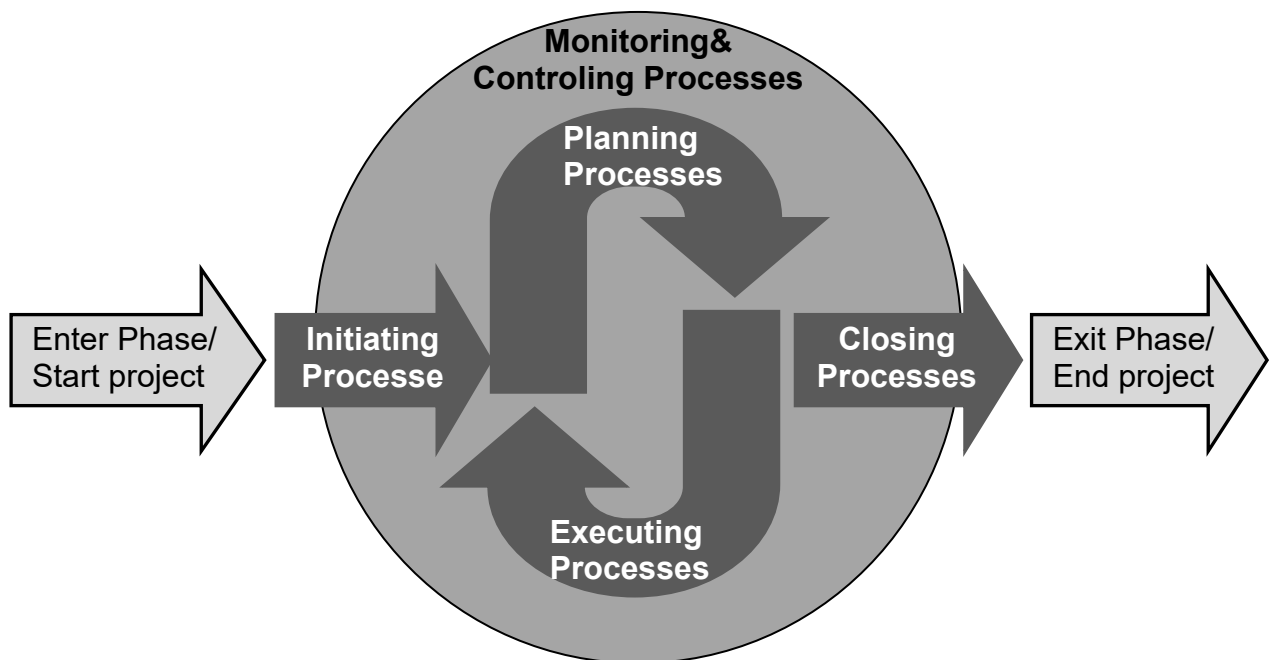


Fig. 5. Project Management Process Goups [1]

- Initiating Process Group. Those processes performed to define a new project or a new phase of an existing project by authorization to start the project phase.
- Planning Process Group. Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.
- Executing Process Group. Those processes performed to complete the work defined in the project management plan to satisfy the project specification.
- Monitoring and Controlling Process Group. Those processes required to track , review, and regulate the process and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes.
- Closing Process Group. Those processes performed to finalize all activities across all process Groups to formally close the project or phase.

According to each of the five stages, a construction project shows a number of managerial and strategic particularities.

Stages in the initiating process:

- Pre-feasibility study; Feasibility study
- Tender organisation, Subcontractor selection, Selection of suppliers for materials and equipment – (Pre-feasibility stage – RFP = Request for Proposal)
- Assessing location options -Zoning Plan, Analysis of the geotechnical survey
- Cost-benefit analysis
- Preliminary analysis of project content, of organisational environment, Building construction feasibility analysis

Stages in the planning process:

- Developing the Management Plan
- Defining requirements, Project scope, Allocation of activities by level
- Defining and sequencing activities, Fast-tracking optimisation
- Assessing resources and durations – analysis and optimisation
- Timeline scheduling of project activities
- Cost estimation and budgeting
- Quality Planning
- Selecting subcontractors for final solutions in design and execution
- Planning human resources and their optimal allocation
- Contracting plan
- Devising the project communication plan - Communication matrix
- Devising the risk management plan Planning contracts and purchases
- Planning for health and safety in the workplace
- Financial planning -Cost estimation and budgeting
- Planning the management process concerning impact on environment

Stages in the execution process:

- Steering and management of project execution;
- Ensuring contracting quality levels in execution;
- Information distribution coordination and management;
- Coordination of all participants in the project (investors, suppliers, client)
- Organisation of tender process, communication with potential suppliers and selection
- Ensuring the safety of all factors involved in the execution of the project

Stages in the Monitoring and Controlling Process:

- Monitoring and control of execution activities
- Monitoring and control of changes throughout execution
- Verification of project requirements and of scope, identification if “what is” and “what is not” part of the project
- Control of work quantities and progress monitoring (how much was done compared to what was planned, how much was paid compared to how much was executed)
- Analysis of the project performance and progress indicators
- Monitoring and control of project costs, cost/performance indicators
- Project quality monitoring and control
- Monitoring and control of execution risk and risk reserve
- Monitoring of contract management (materials, workforce, equipment, transport contracts)
- Analysis and control of works solidity/safety
- Monitoring and control of interactions with the environment
- Financial control and analysis
- Conflict analysis, monitoring and control (including prevention)
- Regular reports concerning the advance of the project, with corrective actions

Stages in the closing process:

- Closing services contracts
- Partial reception protocols
- Final reception protocol
- Closing and handover of as-built documentation to client
- Producing the paperwork required for commissioning the objective

The involvement of civil engineering professionals in the stages of a construction project influences quality, duration and investment costs. To the same extent, the current stage of development of the construction and road infrastructure development on which Romania's social and economic evolution depends also requires the involvement of a project management specialist.

Important steps towards an efficient and sustainable construction industry

The three determining features of any construction project – cost, quality and time – force the project team to observe the set budget, to meet the quality requirements and the agreed deadline. Any construction project, irrespective of size or location, must be approached with the same interest, because the achievement of a large number of quality projects will create the efficiency and quality trend that the industry needs at this moment. This desiderate can only be achieved through the engagement of technological advancement, highly-trained construction engineers, logistic elements and internationally standardised management techniques.

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Performances Measurement in a Total Quality Environment

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Abstract

Purpose – The article investigates the enterprise performance measurement systems (PMs) design and the link with operational performance in a total quality environment of the automotive industry, based on a practical implementation example.

Methodology/approach – Starting with the description of the evolution of the concept of PM, it has been identified why it is important to measure the performance, which are the limitations of financial metrics and which are the key elements for the PMs design. The following have been analyzed: the benefits of having in place such systems, the managers and employees perspectives and the tools needed to link the company strategy with processes and work cell indicators. Kaplan and Norton's balanced score card and Mendory and Steeple's PMs are presented too. An implementation process is described, for a Romanian company.

Findings – Practical implementation is faced with different problems which can occur during this phase and further. On daily activity, the worst possibility is to build a virtual reality, based upon corrupted indicators, with negative consequences on decision making processes.

Research limitations/implications – Only the automotive area was taken into consideration and just one company implementation model was presented.

Practical implications – It would be interesting to test the PM design and implementation model to other companies and industries.

Originality/ value – A practical implementation model was described and recommendations for PM systems' design and improvement were conceived.

Key words: Performance measurement, Total Quality Management, virtual reality

Introduction

Organizational performance has always exerted considerable influence on the action of managers and shareholders. Consequently, the ways and means of accurately measuring the performance is perceived as being very important. There are two paradigms referring to PM: on one side, Lord Kelvin (1824-1907) said: "When you can measure what you are speaking about, and express it in numbers, you know something about it. But when you can not measure it, when you can not express it in numbers, your knowledge is of a meager and unsatisfactory kind....."; on the other side, Albert Einstein (1879-1955) states: „Not everything that can be counted counts and not everything that counts can be counted”.

Approaches of the PMS concept

Traditionally, PM derived from accounting information, often being made on arbitrary principles. The main criticism of this system refers to:

- providing irrelevant or incomplete information; the information was recorded in the isolated points (e.g. equipment efficiency, ratio of direct and indirect production staff);
- generating late financial information which don't allow corrections on time;
- ignoring the customer's perspective (nor the external one, nor to the internal)
- determining the behavior that undermines the policy objectives

What was missing was a system to provide feedback to staff in all operational areas.

The use of non-financial performance measures is not new. For example, General Electric (GE) in the US was using non-financial measures in the 1950s and French firms have used the "tableau de bord", which can be dated back to 1932 according to Bourguignon et al., (2004). In recent years, considerable research has been directed at constructing systems of non-financial measures. Probably, the most well known of these systems is the balanced scorecard (BSC) of Kaplan and Norton (1996). The authors claim that "the scorecard addresses a deficiency in traditional management accounting systems: their inability to link a company's long-term strategy with its short-term action" [Bitici et al, 2004].

The key elements necessary for the PM design

The main purpose of PM is to deliver reliable information to support decision making. For the design and development of PM systems we select as representative the recommendations described by Folan P, (2005):

- 1) PM systems should be based upon the strategic role of the company. It should be mutually supportive and consistent with the business's goals, objectives, critical success factors and programs; PM should be based upon multi-criteria which should evaluate group not individual work; Feedback from PM systems must be linked cross-functionally to ensure it supports and not inhibit strategy implementation
- 2) Measurements should convey information through as few and as simple a set of measures as possible; this should be easy to understand by those being evaluated
- 3) Data should be collected, where possible, by those whose performance is being evaluated; graphs should be the primary method of reporting performance data
- 4) Performance should be reported daily or weekly; data should be available for constant review; routines must be established so that measures can be measured and analyzed; emphasis is upon evolving, dynamic, continuous improvement and learning in PM system design
- 5) Suppliers should be evaluated upon quality and delivery performance
- 6) PM systems should reveal how effectively customers' needs and expectations are satisfied; should focus upon measures that customers can see
- 7) Provide measures that allows all members of the organization to understand how they affect the entire business
- 8) Feedback from PM systems should report at numerous levels of the organization. Should enable managers to view performance in several areas simultaneously
- 9) Should measure the entire product delivery system from the supplier to the customer
- 10) PM system design should be viewed as a co-ordination effort to understand current metrics in detail, to identify shortcomings and to include ongoing initiatives that affect it.

Process to establish PM / selecting performance measures

Determining the metrics must be a collaborative process that include brainstorming questions such as "What do we need to get better at?" It includes a lot of discussion and debate before ultimately making a selection. Kaplan R. and Norton D. (1992) recommended a series of workshops and interviews, while Neely et al [according to

Folan P, (2005)]: have described a pilot process, consisting of a number of subjective phases, ranging from check sheets to brainstorming, in a 12 phase model to overcome selection issues. Basic, the PM should:

- have top management support;
- involve employees in their development, ensure that those measures used are relevant to managers and employees in performing their day- to –day activity;
- be part of a feedback loop that links them to manager and employee appraisal.

The PM impact on management and employees

At each organizational level, people need rapid and relevant feedback. The measurements influence and drive people's behavior. The study of Ukko J. et al (2007) focuses on the impact of PM on management and leadership through the perspectives of managers and employees, based on an empirical study from eight case organizations applying the BSC. Representatives of both management and employees were interviewed in each case organization. The study concludes that: PM can only support, not replace managers in leading people and, increased interactivity between the managers and the employees leads to higher performance.

PM and Total quality environment requirements

Total Quality is a description of the culture, attitude and organization of a company that aims to provide its customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with things being done right first time, and defects and waste eradicated (Juran, 2001).

The PM system is build according to TQM if the development process and implemented system are based on the principles presented below:

- Customer-driven quality principle requires people being sensitive to customer requirements and responds rapidly to them: defect and error reduction, meeting customer specifications or reducing customer complaint. It also necessary to treat the internal customers with the same sensitivity and responsiveness as it would external customers.
- TQM leadership from top management. Commitment and personal involvement is required from top management in creating and deploying clear quality values and goals consistent with the objectives of the company, and in creating and deploying well defined systems, methods and performance measures for achieving those goals. These systems and methods guide all quality activities and encourage participation by all employees. The development and use of performance indicators is linked, directly or indirectly, to customer requirements and satisfaction, and to management and employee remuneration.
- Continuous improvement of the quality of the product and processes implies that all activities include measurement and monitoring systems (e.g. cycle time, responsiveness etc.) as a basis for seeking opportunities for improvement. Elimination of waste is a major component of the continuous improvement approach.
- Fast response: To achieve customer satisfaction, the company has to respond rapidly to customer needs. This implies short product and service introduction cy-

cles. These can be achieved with customer-driven and process-oriented product development because the resulting simplicity and efficiency greatly reduce the time involved. Simplicity is gained through concurrent product and process development. Efficiencies are realized from the elimination of non-value-adding effort such as re-design. The result is a dramatic improvement in the elapsed time from product concept to first shipment.

- Actions based on facts: The TQM approach is based on the use of objective data, and provides a rational rather than an emotional basis for decision making. The statistical approach to process management in both engineering and manufacturing recognizes that most problems are system-related, and are not caused by particular employees. In practice, data is collected and put in the hands of the people who are in the best position to analyze it and then take the appropriate action to reduce costs and prevent non-conformance.
- Employee participation and TQM culture: Employees have to be made to feel that they are responsible for customer satisfaction. They are not going to feel this if they are excluded from the development of plans and monitoring systems. It's important that they participate in these activities. As people behave the way they are measured and paid, TQM links remuneration to customer satisfaction metrics.
- Process-oriented teams, which interact with their internal customers to deliver the required results. Management's focus is on controlling the overall process, and rewarding teamwork.

The following table presents the link between strategic goals, process objectives and cell objectives (measured through specific indicators) in a lean production system, the American interpretation for TQM.

Table 1: The link between companies' strategy, processes and production cell indicators, adapted from "Starter Set of Performance Measurement for Lean Manufacturing", 2010

Strategic Goals (Key Process Indicators)	Process		Cell	
	Objective	Measures	Objectives	Measures
Grow sales & Improve Productivity (Sales Growth)	Increase thru-put with same resources	Units per Person On-time shipments to Schedule	Reduce cycle time Build to Schedule	Day by Hour Report Work in progress (WIP) to Standard work in progress (SWIP)
	Reduce lead time	Dock-to-Dock Time First-time Through		
	Reduce inventory	Average Cost per unit	Reduce Batch Size (Single Piece Flow)	Operational Equipment Effectiveness
Increase Earnings (EBITDA, Sales per Employee) Increase Cash Flow/ (Inventory Turns)	Perfect Quality	Accounts Receivable Days Outstanding	Eliminate Variability	First Time Through
	Improve Productivity	Value Stream Gross Profit Percentage		
Improve Customer Satisfaction (On-Time Delivery, Customer Satisfaction)	Increase Improvement Project Participation	OEE at Constraint Cell	Average Projects per Cell	Number of Improvement Projects
		Average Projects per Person	Effective 5S Program	5S Audit
Improve Employee Satisfaction (Employee Turnover)	Provide Advancement for Employees	Average Cross Training per Person	Increase Cross Training	Cross Training Chart
	Eliminate Injuries and Accidents	Number of Safety incidents	Work Environment that is wholly safe	Safety Cross

Examples from the most known today PMs Systems

We have selected to present, in short, two academic PM systems, as being representative of the available PM systems` literature: Kaplan and Norton`s balanced scorecard (BSC) PM system and Medory and Steeple`s PM system.

Kaplan and Norton`s balanced scorecard (BSC)

The BSC is designed to complement “financial measures of past performance with their measures of the drivers of future performance”. The name of the concept reflects an intent to keep score of a set of items that maintain a balance “between short term and long term objectives, between financial and non-financial measures, between lagging and leading indicators, and between internal and external performance perspectives”.

The BSC framework is based upon four perspectives surrounding the company`s vision and strategy: financial perspective, customer perspective, internal business perspective, and learning and growth perspective

The use of BSC at strategic level, provide a new framework in four stages:

- „Translating the vision” is concerned with clarifying and gaining consensus over a version of the firm`s strategic vision that is operational upon all hierarchical levels.
- “Communicating and leading” is the process by which managers communicate their strategies up and down the organization and link it to departmental and individual objectives.
- “Business planning” is the process by which the companies integrate their business and financial plans
- “Feedback and learning” gives companies the capacity for strategic learning; existing processes review whether individuals and departmental financial goals have been achieved, while the balanced scorecard enables a company to monitor short term results for its three additional perspective.

The Medory and Steeple`s PM system

This system takes into account measuring in areas related to some competitive priorities: quality, cost, time, delivery and future growth and they introduce a procedural PM framework which follows six stages:

1. A company`s manufacturing strategy is defined and the strategic requirements (including customer requirements) are identified.
2. Strategic requirements are matched against competitive priorities.
3. Measures are then selected from a separate predefined list of measurable (105 mainly non-financial measures, with full description and methods of calculation. Next is stage 4, which is omitted if the company has no existing PM system
4. Audit—the existing set of measures is listed down and compared with the new measures that have been identified in the previous stage. Three rules are applied:

- existing measures that are congruent with new measures are kept and continually used;
 - existing measures that are divergent with the new selected measures are deemed no longer relevant or useful to a company—they are scrapped;
 - new measures selected that do not tie with existing measures are implemented. They represent “gaps” in the PM system;
 - if no “gaps” are identified then stage 5 (next) is omitted.
5. Implementation of measures—an eight-step plan is provided for company implementation of the new measures.
 6. Periodic maintenance—the last stage of the system revolves around periodically reviewing a company’s PM system.

Practical example: “QCDSM” system implementation, based on Autonomous Manufacturing Organization (AMO)

Each PM system is organically link with the company structure. In order to present the implementation in a Romanian automotive company, we first need to explain the organization system, implemented in the same time with PM and the policy deployment system, a tool which helps to translate and communicate to all employees the vision, strategies and plans through measurable.

AMO stands from Autonomous Manufacturing Organization, which combines two approaches: hierarchical organizational and multifunctional teams.

The purpose is to get/ create a better engagement and focus on:

- targets, planning of activities to reach targets,
- follow-up on results, responsibility of own operation/ team,
- speed-up time to decision and increase speed in continuous improvement work.

AMO has four hierarchical levels. Each level is lead by a team formed with representatives from all production and support functions: logistics, quality, maintenance, process engineering (PEI), Human resources (HR). AMO team consists of: Plant Manager, AMC Managers, Logistic & Purchase Manager, Quality Manager, Process Engineering (PEI) & Maintenance Manager, Human Resources Manager. The main task is to create long-term overall strategy and tasks and to follow them up.

The basic unit of AMO is AMT - Autonomous Manufacturing Team which consist of peoples from 1-4 production lines: operators, maintenance technicians, quality operators etc. They have to work according to standards, monitor in time production line indicators, put in action corrective actions and continuous improvements activities.

Several AMTs form an Autonomous Manufacturing Group. For the AMG team 85% of time is spent on issues in a timeframe from today – 1 month. Next level is Autonomous Manufacturing Center. The Main task is to perform activities that support tasks deployed by AMO and to follow-up. 70 % of time is spent on issues in a timeframe of 1 month – 1,5 years.

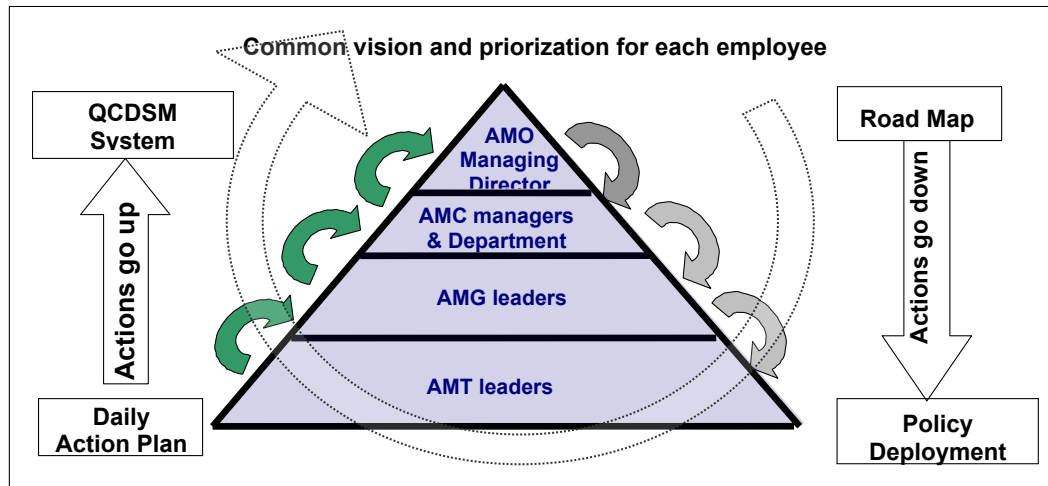


Fig.1. AMO organization, the Policy Deployment system and QCDSM system

According to this organization, illustrated in Fig. 1, the objectives and targets are deployed from upper levels to the basis through a PM system, which is used also to follow the activities, escalate problems and report. This PM system is called the QCDSM system. The letters of QCDSM means: Q= Quality, C= Cost, D= Delivery, S= Safety, M= Management. QCDSM require regular on-time meetings between the different AMO levels, and an escalation model in place. The purpose of QCDSM is:

- identification of abnormalities and prioritization of actions to be taken,
- regular follow-up of production data, AMO's goals to be achieved at each level,
- indicator of status by Visual Management.

According with the area, one to four measurable could be followed for each domain/ "letter". Usually indicators, but not limited to, are:

- **Quality:** Customer complaints, PPM (parts per million), Sub-assembly problem, Component or raw material problems, Rejects, etc.
- **Cost:** OEE (overall equipment efficiency), Scrap, Downtime, Rework, LMPU (labor minute per unit), Non Productive Hour (NPH), Inventory Turns
- **Delivery:** Contract Deviation, OTD (on time delivery), Lack of Material.
- **Safety:** Number of Incidents, Number of Accidents, Risk of Accidents, Ergonomics, Environmental Indicators.
- **Management:** Absenteeism, 5S Deviation, Capacity Problems, Overtime, Suggestions.

Letters are divided in cells depending on frequency and number of followed indicators: frequency can be daily, weekly and monthly and followed data can be from 1 up to 4.

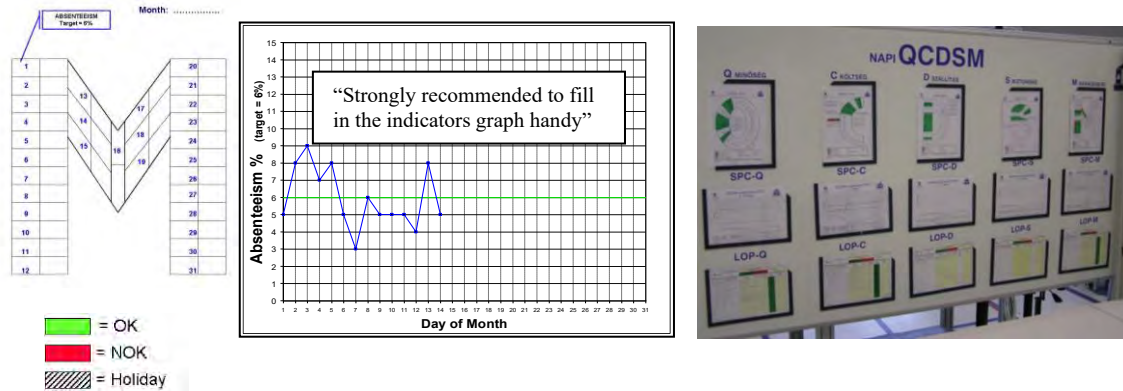


Fig. 2. Example of “M” indicators, daily follow-up indicator and QCDSM board

For each indicator, we need to define the target (green line) and acceptable deviation (min/max). A follow up graph will be placed near the letter and an action plan.

In order to understand how QCDSM process works, let’s follow the example for AMG level process:

- Meeting preparation: AMT Leaders and AMG Members collect all necessary data and request for help to solve problems beyond AMT’s range and bring them to AMG’s meetings.
- QCDSM meeting 1st step: AMG Leader meets with AMG Members (Quality, Maintenance, and Logistic) and AMT Leaders in the QCDSM board.
- QCDSM meeting 2nd step: AMG Team check together all data, fulfill the indicator handy and dye the QCDSM letters accordingly. Indicators followed:
 - Q - Quality: Quality rate per each production lines
 - C - Cost: OEE per line
 - D - Delivery: On time production (OTP)
 - S - Safety: Accidents, Incidents
 - M - Management: Suggestions, Absenteeism
- QCDSM meeting 3rd step: The group prioritize abnormalities and indicators and create the action plan to solve or correct the problems with a person responsible and date.
- Preparation of AMC meeting: Collect all necessary data and request support to solve problems beyond AMG’s range and bring them to AMC’s meetings.

PM implementation’s recommendations:

- Each person must understand the real meaning of the indicators, what is behind the number they record and, analyzing a pool of indicators, which one is the most critical. For example, the line leader must work and prioritize actions according with his knowledge. If he records an OEE of 60% against 70% (target) and in the same time a scrap rate of 2% against 1.5% (target) he must decide which the priority is, in order to take action. He must know what he can do with his team, with their resources and knowledge. Basic training regarding companies’ measurable is mandatory from the beginning, according with each level necessity.

- Another problem could occur when new IT systems are introduced, in order to facilitate data collection and processing. The people might forget to calculate one indicator and forget the meaning too.
- Sometimes, the same indicators affect different groups, and each group will fight to record different data. For example, when a breakdown occurs, the production people want to register the entire non-production time, and the maintenance guys, record just repair time. The time needed for calling maintenance, preparing intervention, new set-up after intervention, etc. is not important for maintenance department, but it affects the productivity rate from production people's point of view.
- If the upper levels are looking just for numbers, and they don't check the reality, it is possible for lower levels to adjust the figures, or to move the target, to be all the time on the inside of the indicator limits or, on "green". There is no workplace without problems. If all the indicators are ok, then the team will not work on any subjects. No problems, is a real problem! Looking just for numbers, will encourage people to build a virtual reality: nice boards, without any scope!
- The PM system must be assessed from time to time, by local manager and employees, in order to ensure that those measures used are relevant in performing their day- to -day activity. Too many meetings or too many indicators, following the same data but analyzed with different people, at different levels, can lead to the confusions regarding action which must be done or the responsibilities.

Discussion and conclusions

The main purpose of PM is to deliver reliable information to support decision making on the different levels of the organizations. The PM is important because:

- What we measure is what we get.
- Measurements drive people's behavior. People need rapid and relevant feedback.
- Measurements indicate progress towards planned goals (internally or externally)
- Measurements indicate the improvement opportunities (i.e. cost of quality)

PM can only support, not replace managers in leading people. When operating with a PM system, the increased interactivity between the management and the employees leads to higher performance. A TQM environment, based on a quality culture at all levels, requires that the PM measurement sustain the TOM principles: customer-driven quality, leadership from top management, continuous improvement approach, fast response to market changes, actions based on facts and employee participation. A clear link between company's strategic goals, process objectives and cell objectives are mandatory.

Most known PM systems in automotive industry are based upon four perspectives: financial, customer, internal business learning and growth perspective and the indicators, at each level, respond to some competitive priorities: Quality, Cost, Delivery, Safety and Morale.

The design of the PM system is tailored on the organizational structure. It has three steps: the up to down's policy deployment: strategies are translated into targets through measurable, the second-analysis and corrective actions, based on indicators' follow-up and the third step the problem escalation and report, from down to up.

The implementation of the PM system requires training on different metrics and clear responsibilities inside the system. Day to day activity could lead to internal fights between group of peoples or different problems hidden behind green indicators. In order to avoid the system erosion, periodically assessments are recommended.

Notes

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Analyzing a Possible Investment on Travel Agency Market in Cluj-Napoca Using Porter's Five Forces

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Abstract

The purpose of this paper is to find the right answer to the question: Is it profitable to open a travel agency in Cluj-Napoca? In order to answer this question we used dates regarding the costs a "new born" travel agency needs in order to be launched on the market and survive, we analysed all the elements in Porter's Five Forces on the market of travel agencies in Cluj-Napoca.

Key words: tourism, Porter's Five Forces

Introduction

Tourism individualized as a socio-economic phenomenon, at the global level, in the last century, knowing a rapid expansion and generalization, now being seen as a constituent and ordinary element of the everyday life.

Worldwide, in 2009, tourist movement consisted of over 880 million people, down from 2008 when the number of tourists exceeded 922 million.¹ Speaking from an economical point of view², tourism's effects is beneficial, as in 2008 revenue from tourism totaled 30% of international exports of services, revenue exceeding 642 billion Euros and the number of people employed in this sector exceeds 35 million³. According to Trade Register⁴, the number of companies registered in the field of activity "Travel agencies and tour operators, other reservation services and related activities", since January 2010 until may 2010, is 43 and represents 0.4% of total registrations (10,273) in all fields. UNWTO forecasts show a growth rate of 4.1% until 2020, when the number of tourists will reach 1.5 billion people.

The accelerated evolution of the tourism sector has resulted in fierce research in this area. One of the oldest definitions of the field is given by E. Guyer - Freuler (1905): "Tourism is a phenomenon of our times, based on the increasing need for health recovery and environmental change, on the rise and development of a sense of receptivity to the beauty of nature."⁵

The definition given by the economist W. Hunziker was later acquired by schools studying economy of tourism "...through tourism we understand complex relationships and phenomena resulting from the trip and residents' stay, insofar as this does not lead to stay for long period of time, nor result in a gainful activity" (1940).⁶

Forms of tourism have been practiced since ancient times, during times of Babylonian Empire and Egyptian Empire. Greeks are also known for their pleasure of traveling, visiting holy places, healing baths attendance and participation in festive games.

Under the leadership of the Roman Empire, the movements have become really important feature, mostly because of lack of borders from England to Syria, the decrease in number of sea pirates due to Roman patrols, the existence of a single Roman coin and the use of Latin by all the inhabitants of the empire. A very important role was played by building a system of roads, 80,000 km of road⁷ (twice the earth's circumference - 40041.47).⁸

In the Middle Ages the number of travelers increases both in terms of number and in terms of social class: ambassadors, merchants, priests, pilgrims, scholars, journeymen, students, street artists. The beginning of the Seventeenth century, led to the development of new forms of tourism, the young gentlemen eager to obtain positions at the Queen's court were encouraged to travel on the continent in order to complete their education.

In modern tourism's development, travel agencies played a very important role. A travel agency is a specialized unit, a legal entity that organizes and sells package tours. Some experts argue that the oldest travel agency is the British company Coke & Kings - bank founded in 1878 - given the services it offers its very wealthy customers. The first modern travel agency appeared in the second part of the nineteenth century, when Thomas Cook made the first package tour and developed a chain of agencies, selling packages and also representing other companies.

With the development of commercial aviation from the early 1920s, travel agencies have taken a strong momentum. At first they were oriented towards social classes with high living standard and after the Second World War, the economic conditions favored the development of mass tourism, so that travel agents were found in front of numerous clients, which favored their development.

Tourism in Romania

Regarding tourism development in Romania, there is evidence dating from the Roman period, in particular balneary tourism. Starting with 1875 mountain tourism and the Black Sea seaside started to be exploited. An important step was the establishment of O.N.T. in 1936 whose role was to coordinate all tourism activity, engaging in creating organizational structures that will contribute to the regulation of individual and group tourism.⁹ O.N.T. played an important role after 1955 contributing largely to the introduction of spatial knowledge and its tourism potential in the European circuit. The period before 1990 has not condoned the market of private travel agencies, so there was no competition for travel distributors.

Travel agencies can be considered private economic units having inputs and appropriate assets to fund the design of services (tourism products) to meet tourists' needs. The most important components of tourism products are basic services. This category includes those services that tourists can not give up (transportation, accommodation, leisure). They have an important part in tourist consumption' structure; all other services are considered additional, and aim at a better adaptation of basic services at tourists needs.

With market liberalization, the development of travel agencies began, both with Romanian capital and foreign capital in various cities of the country. Data of the National Association of Travel Agencies (ANAT) and industry players' data show that in 2008, the total market value of travel agents was 700-800 million RON. Bucharest is the center with the largest number of travel agents (around 813 tour operators). Cluj is also in the top, with 84 travel agencies at the county level¹⁰, being ranked on the 3rd place after Bucharest and Constanța.

Given the above figures it is appropriate to ascertain whether the travel agency market from Cluj-Napoca is as profitable and attractive as it looks at first site. It was assumed the existence of an investor who has decided to establish a travel agency, and considers necessary to conduct a study. In order to do this we used Porter's Five Forces on competitive positioning. It is a strategic management tool that defines the company in terms of product strategy and marketing. It allows to analyze the attractiveness of an industry's structure. This model offers a simple approach for analyzing and quantification of power and of the position a company has on the market, determining industry attractiveness and identify key success factors. Intensity of competition and competitive forces constrain a company's options and influence on long-term, the ROI indicator. Threats and opportunities in an industry can be identified by understanding the interrelation between profitability and competitors and strengths and weaknesses by understanding the competitive pressures.

Managers use "Porter's Five Forces Model" in several situations: when preparing a strategy, when preparing budgets, when taking investment decisions.

Analyzing Cluj Travel Agencies Market using Porter's Five Forces

Efficient conduct of a company's activity requires a careful consideration of all factors present in the sector. The analysis' role is to exploit favorable factors and to prevent unfavorable factors that could adversely affect business activity. To determine competition in a sector one can use Porter's Five Forces. These forces have the ability to influence how a company obtains profit and how it serves its customers. The intensity and the importance of these forces is the same in all industries. These forces are presented below:

1. Threat of new market entrants - one of the problems a company faces when entering a market are barriers to entry. Therefore a question arises: how easy or how difficult it is for a new company to enter in a competition in the industry, and what barriers are there for the new competitors?
2. The bargaining power of suppliers - other questions that need to be answered are: how strong are the suppliers? Are there many suppliers? Is there a monopoly?
3. The bargaining power of customers – related to customers there are some questions: how strong is the position of buyers? Can they buy in large quantities?
4. The threat of substitute products or services - how easy can the product or service be replaced and at what cost?
5. The intensity of competitive rivalry – how many active companies are in the industry, is there a strong competition between them, is one of them dominating the market? Are somewhat equal in power?

Each of these forces are influenced by several factors to be examined, modifying one of them, forces the company to review the market.

Next, there will be presented for each of Porter's Five Forces, aspects referring to tourism industry, focused on the travel agency market in Cluj-Napoca.

1. Threat of new market entrants – it is known that when a new company enters a market, existing firms suffer as sales decline. The capacity available to a new market entrant, the efforts he makes to occupy a favorable position and the new

concepts promoted by him, influence the industry because it can take a large part of the market share of the existing firms.

Barriers to be overcome by new market entrants are:

- Transfer costs - costs that a customer is required to pay in order to switch from one provider to another. The question that some clients are thinking is why he should choose a service offered by a new agency, when the old ones already have a reputation in the market. Even if prices offered by a new agency are lower, the client is more reserved in choosing the services this new company provides.

In order to attract clients of the rival firms, the new entrants must offer immediate advantages in terms of price, quality or cost-effectiveness.

- The experience - for a new market entrant lack of experience involves additional costs. These costs are caused by the "accommodation" period (customer training) through which the company goes to at the beginning.

- Access to distribution networks – if the firms that are already on the market have access to the distribution network, a new company does not enjoy this advantage. Membership to a distribution system requires additional costs for a newly created agency.

- Existence of "products stocks" - where demand for certain packages is greater than the existing market is more difficult for a new agency to offer this. The new company can only seize the customer if it offers something special.

- Capital needs – the financial resources which a new agency should have, are considerable in order to face the competition.

To set up a travel agency in Cluj-Napoca, prices are as follows:

- Costs of establishing the company: 1000 RON (capital);
- Obtaining travel authorization: 100 RON;
- Purchase of computers and Windows licenses: $2000 * 3 = 6000$ RON;
- Guarantees for future service providers: Neckerman - EURO 7000;
- Space rent (central zone): 600 EURO - 20 sqm;
- Other expenses;
- Water: 50 RON;
- Electrical: 100 RON;
- Gas: 200 RON (winter);
- Fixed telephony + internet: 500 RON;
- Mobile: 700 RON (5 mobiles);
- Google: 1000 RON;
- 4 employees' salaries: 5600 RON.
- Government policy and existing regulations - for a travel agency it is required to obtain travel permits.

2. The bargaining power of suppliers - and also selecting the appropriate suppliers is particularly important for a travel agency. Travel fairs are an important source of contact for travel suppliers, to sign contracts and start working with service providers, internal or external tour operators.

When choosing a supplier one should look at: seriousness in compliance with contractual discipline, price, distance, economic power, "image" on the market, etc..

One company performs contractual relationships with several suppliers in the same field in order not to be dependent on one alone. However, when talking about the main providers a company has long-term relationship. In the following there will be presented the main possible suppliers of travel agency operating on Cluj - Napoca market.

- external packages (charter): Kartago Tours, Malta Travel, Perfect Tour, Parallel 45, Calibra, Mareea, Best Reisen, Universal Turism, Kusadasi;
- accommodation in the country and abroad: GTA, Hotelcon;
- Romanian seaside: Eximtur, Mareea, Nova Travel;
- Tickets for minibus / bus: Amassis, Huben, EUROLINES, Atlasib, Tabitha;
- Airline tickets: Blue Air, Wizzair, German Wings, Eximtur (they are intermediary for a "new born" travel agency who is not classified IATA);
- Pensions in rural areas but not only: Agrotrip;
- travel insurance, RCA, Green Card: Ardaf, Banca Transilvania, BCR, Generali, Rai.

One of the providers of tourism packages is The Ministry of Tourism, which developed various programs for tourism, with themes such as "Super skiing in the Carpathians", "Cruises on the Danube", "Summer in the Country", "Black Sea littoral for All etc.

Other vendors working with a travel agency are printers, advertising agencies, suppliers of computer software.

3. The bargaining power of customers – tourism consumers are a special category of consumer as they aim "to buy and consume goods and services, a commodity, but want to procure the satisfaction the actions mentioned above generate. Tourism supply is perceived by the demand as an "image" constructed by aggregating and summarizing all the influences received and filtered by personal defining of each information receiver of each potential tourist.

Consumer's decision is adopted only in relation to the image of the tourism's offer. Direct contact with tourist offer is determined only when the consumption is realized.

An agency needs to know at any moment the satisfaction or dissatisfaction degree of its customers through two dimensions:

- benefit sought by the client – meaning to ensure that the customer will get exactly what he wants by paying the service purchased and "the weapon" against competition, because the service trivialized or the offer is much higher than the demand;
- the experience when consuming the service - starting from the first contact that the customer has with the company staff, underlying factual elements forming the customer's experience, namely:
 - The existence of choice;
 - The attitude of the sales staff (kindness, understanding, initiative);
 - The perceived risk when choosing service, partly because the company's image and reputation;

- Speed and accuracy of responses to clients' questions;
- Personalization services;
- Response to complaints received from customers;

Another issue that must be clarified are the main categories of customers. For tourism industry the following categories have been identified:

- unmarried;
- young families without children;
- young family with children under 6 years;
- family with older children than 6 years;
- aged family with children to maintain;
- older family whose children have left home;
- family where the spouse has retired;
- retired family with grandchildren.

Data collected on the tourism market are:

- 2007 – tourism market has increased steadily by about 30% over the past two years;
- in 2008 by travel agencies have gone abroad about 730,000 people representing 5.5% of total departures abroad¹¹;
- by 2009 the number of customers of travel agents decreased by 10% compared to 2008.¹²

4. The threat of substitute products or services - identifying replacement products is quite difficult because there are few substitutes.

Benefits of a travel agency to other tour operators (substitutes) is that it provides greater consumer protection, financial guarantees granted.

- online travel – the vacations and tickets purchased online are 10% - 20% cheaper than those purchased from travel agencies;
- In Romania, internet sales represent only 3% of total sales (in the west they are closer to 30%);¹³
- e-commerce (virtual vacation – “multi-operator tourism shopping cart”) - 25% of e-commerce concerns Romanians holidays;
- individuals providing specific services.

5. The intensity of competitive rivalry - competition is an important factor in microenvironment of the company, which major influence on its activity.

The tourism sector is under the competition law 21/1996-legea. Competition in the tourism sector is characterized by: uniqueness, sensitivity, dynamism, complexity, uncertainty, distinct capacity to support sustained growth of the company.

It can be noticed that in tourism, there are cooperation agreements between agencies, but at the same time there is competition and rivalry between the exact same companies.

Competition can be assessed as being very strong in Cluj-Napoca area, activating approximately 100 travel agencies. For this reason a new travel agency has to try to differentiate and must come up with an offer as variable as possible, maintaining quality standards with which to gain a market segment as well defined as possible.

It is important that the travel agency to consider direct competitors, meaning competitors located in the area.

Close competition on the tourism market is also obvious from the following statistics:

- In January 2010, there were over 3000 travel agency in the Romania;
- According to Cluj-Napoca Town Hall site currently there are 99 travel agencies;

The main types of strategies that a travel agency can call to compete are:

- a) The low price strategy - this strategy is used by an agency: to attract customers, to occupy a better position in the market, to eliminate competition. Part of this type of strategy is the average price, because a very low price implies distrust and therefore does not attract certain persons;
- b) The fixed-price strategy is advantageous because buying the whole tourism package, the price is lower than if the products were purchased separately. It is a mean by which customers have confidence that in addition to accommodation services, they will receive other services too;
- c) Price differential - this type of strategy is applied by setting a minimum price and a maximum price. The package chosen by the customer will oscillate between the two limits depending on the particular product characteristics.
- d) strategy rebates and bonuses (provided for customer retention) – a strategy enjoyed by organized groups, children under a certain age and other customers.

Conclusions

From the analysis we managed to realize, there are a number of conclusions that can be drawn regarding the travel agency market of Cluj-Napoca:

Threat of new market entrants

- Costs of setting up a travel agency are relatively low (unlike for example a manufacturing company that requires extremely expensive equipment);
- Operating permits are easily obtainable;
- The new agencies that entered the market have tried to diversify compared with existing packages offered to a certain niche of customers;
- The time needed to form a brand on the market is quite low since at the end of a holiday, a satisfied customer can bring other customers.

From the above it appears that barriers to entry on the travel agency market are reduced.

The bargaining power of suppliers

- Suppliers of tourism products are generally the same for most travel agents;
- The existence of several possible suppliers for the same product offers the chance for a new agent to choose the provider that is most advantageous;
- The products offered by suppliers are diverse;
- Relations with suppliers are established for a long term.

From the above arguments we conclude that the bargaining power of suppliers is relatively low.

The bargaining power of customers

- If the customer is loyal, his bargaining power is higher and he is granted different discounts: pricing or service quality;
- A new customer's bargaining power is high because a large number of travel agents on the market offers them (him) (the) possibility to choose;
- Agencies offer specialized travel packages according to categories of customers;

That the bargaining power of customers is high.

The threat of substitute products or services

- For a major travel agency online travel and substitutes are freelancers;
- The security offered by a travel agent, makes the customers seek such services.

Threats from substitute products are low.

The intensity of competitive rivalry

- In the city of Cluj-Napoca there are 92 travel agencies (some of which have multiple locations) in a total 99 agencies;
- Collaboration between competitors;

The large number of competitors makes the rivalry between them to be close.

As a final conclusion we want to underline that launching a new travel agency in Cluj-Napoca, can't be a successful one without a marketing plan very well developed and finding that competitive advantage that no other agency has. This could be:

- selling tourism packages through internet (there is only one travel agency that has this possibility developed at a very high potential);
- focusing only on business tourism (including organizing conferences), and become a real name in this niche;

- incoming for foreign tourists on packages that focus on rural areas, adventure tourism or other forms of tourism insufficiently developed in Romania but very well seen by foreigners.

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Using Quality Management Instruments for Improving Project Management

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Abstract

Purpose – This paper intends to explore ways of improving the performance of projects' management by identifying possible quality risks along their development and analyzing possible solutions found within Quality Management.

Methodology/approach – is the results are achieved by correlating the risk analysis results with proven Quality Management instruments, using two important dimensions: stakeholders - to determine the extent of the problem - and possible outcomes - to assess their impact. To validate the research findings, the case study was conducted for a specific project which aims to design and implement a Bologna type master degree programme in Quality Management and Engineering according to market demands.

Findings – Through this case study, the authors show how some specific Quality Management techniques and tools can be used to identify, reduce and prevent project quality risks.

Research limitations/implications – The authors want to highlight the importance of using quality tools for improving activities specific to Project Management.

Practical implications – The case study in the paper can be extended from the presented project or event to any other type of project.

Originality/value – The theoretical approach developed by the authors and the case study results could be relevant for project management practitioners.

Key words: Project Management, Quality Risk, Quality Management Instruments

1. INTRODUCTION

Project Management as a discipline evolved for many years. A successful example of its deployment is the planning and execution of the great Egyptian pyramids and other monumental buildings of the ancient world. However, in a more modern note, outstanding contributions to the development of this area have been made by scientists such as Frederick Taylor, Henry Gantt and Eliyahu Goldratt, leading to the concept that today is synonymous with the inner workings of most organizations.

Organizing the activities by project and Project Management were an effective solution to achieve major objectives of the military, space programs and building sectors. Along with the entry of Romania into the European Community the need for projects to support change increased. Currently it is considered that a large part of the activities of big companies are running by the principles of Project Management.

To achieve meaningful growth, developing countries have to promote infrastructure development, which has a positive “knock on” effect in catalyzing continuous economic development, apart from meeting basic needs (Kumaraswamy and Zhang, 2001). In this context, with the development of information systems for managing the business, particularly with the widespread use of modern techniques of information technology, Project Management spread across all economic activities because it has proven its ability to meet the new world tendencies. The current framework of project management supports both macroeconomic and microeconomic development strategies for companies.

As it is also a primary instrument for many organizations in the Romanian economy nowadays, 20 years after the change in 1989, the present paper sets out to explore possible ways of improving the performance of project management.

2. WORKING HYPOTESYS AND METHODOLOGY USED

According to the Project Management Institute in the United States (Project Management Institute, 2004), a project is "a temporary effect, undertaking to create a unique product or service by applying the knowledge, techniques and relation to design activities in order to meet the needs of shareholders and to meet time, cost and quality requirements".

For a project to succeed it is necessary to meet the following conditions: to be relevant to its purpose (i.e. to yield the expected change), to be technically feasible (i.e. have the right activities within the possible expected change) and to be sustainable in financial terms (i.e. to have an adequate long term return on investment). According to James Jiang (1996), project success consists in defining clear goals, employing a competent project manager, creating a skilled team, proper resource allocation, support from senior management and client consultation.

Quality Management in the context of Project Management is a set of actions, rules and documents directed towards controlling the processes used by project stages and aimed toward reaching its objectives for all interested parties, effectively and efficiently. One way of achieving this goal is to bring forth structured approaches based on proven methods and techniques, such as the ones presented by (Dragomir, Codre and Stanciu, 2009).

This paper aims to examine the life cycle of projects and identify means for removing quality risks to their intermediate and final results. This is achieved by means of risk analysis and the correlation of its results with proven Quality Management instruments. Also, to validate the proposed ideas, a case study on a specific project is analyzed in the light of this approach.

3. QUALITY RISKS WITHIN PROJECT MANAGEMENT

The authors have identified the following phases relevant for the management of a project, together with their significant characteristics, which have an impact on the performance level:

- Project idea - the idea is developed in collaboration with the beneficiaries and the rest of the interested parties and then adapted to meet specific project management requirements;
- Concept and financing - the project is defined, analyzed, written, presented and than financial support is sought;
- Implementation - the project activities are realized and the project progress is permanently tracked in order to comply with its objectives and resources;
- Evaluation and monitoring - the success of the project is analyzed, and its proposed objectives and impact are evaluated against the obtained results, sustainability of the results is monitored.
- Multiplying the results - the impact of the project activities is intended to be diffused and multiplied from the project stakeholders to their own stakeholders.

In the following, for clarification of the proposed structure, two available approaches to this issue are compared along with the above approach, as seen in Tab.1:

Table 1. Life cycle stages of a project

National Institute of Standards and Technology (www.nist.gov)	Widemen Comparative Glossary of Project Management Terms (www.maxwideman.com/pmglossary)	Proposed approach
formulation, planning, project proposal	Conception	project idea
	Definition	concept and financing
planning and project execution	Execution	implementation
transition and completion of the project	Completion	evaluation and monitoring
		multiplication of results

To reduce the possibility of deviations from objectives and to ensure that the existing resource constraints (time, money, people, etc.) are met, a risk analysis is performed and, as a result of this analysis, Quality Management instruments recognized for their ability to deal with specific issues are proposed. The risk assessment is performed using on two important dimensions: affected stakeholders, to help determine the breadth of the problem, and possible outcomes, to evaluate depth of its impact. Their joint effect is used in determining the possible intervention instruments. Table 2 presents an excerpt of this analysis, highlighting the major issues that must be cover within such a deployment.

Table 2. Project quality risks- identification and management

Project stage	Quality risk	Affected stakeholders	Possible outcomes	Useful Quality Management instruments
Project idea	- conflicting ideas - non-compliance with priorities	- project team - top management	- project idea abandoned - unsatisfactory compromise	Data collection / Surveys Cause-effect diagram Brainstorming Correlation diagram
Concept and financing	- inaccurate definition of objectives/activities - erroneous assignment of responsibilities - ambiguous presentation	- project team - financing body - target group	- inability to finish concept delivery - rejected, delaying or partial financing	Flow charts Brainstorming PDPC diagram Tree diagram Matrix diagram

Implementation	- instability of external constraints - inadequate progress indicators - communication issues	- project team - financing body - organization - target group	- activity delays - negative cash flow - lost market opportunities	Ishikawa diagram Flow chart Relations diagram Arrow diagram FMEA (Failure modes and effects analysis)
Evaluation and monitoring	- extensive beauraucracy - inadequate time placement	- financing body - project team - top management	- lack of constructive feedback - demotivation	Data collection Pareto diagram Run chart Correlation diagram Histogram
Multiplying the results	- inaccurate estimates of project results	- target group - financing body	- failure to reach results and/or outcomes - low efficiency of spending	Brainstorming Relations diagram PDPC diagram Matrix diagram

4. CASE STUDY

To validate the research findings a case study of a specific project which aims to design and implement a Bologna type master degree programme in Quality Management and Engineering according to market demands is conducted. The experience gathered within this project constitutes some of the inspiration for the current undertaking. That is why the following part of the paper will present how applying some of the above concepts into the development of this project can contribute to its accomplishment.

Project Idea was validated using *data collection* instrument. There were applied questionnaires to graduates about their labor market insertion. 80 percent of respondents consider that attending the above programme contributed to their personal and professional development, Fig.1.

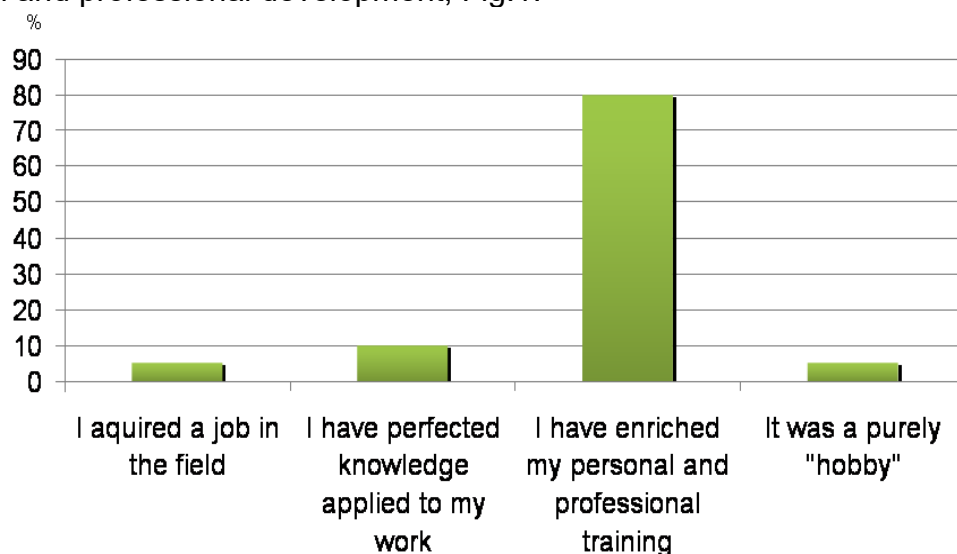


Fig. 1. Benefits of following postgraduate studies in Quality Management and Engineering

Also, potential employers were asked about the importance of candidates' competencies in Quality Management. Most employers considered that students attending postgraduate courses in Quality Management and Engineering would have a competitive advantage, as seen in Fig. 2.

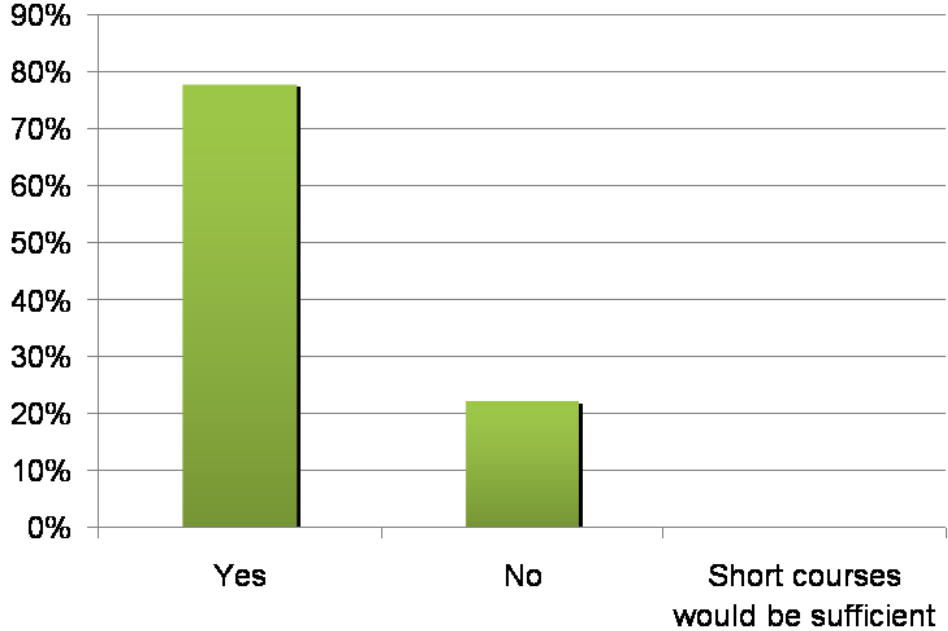


Fig. 2. Importance candidates' competencies in Quality Management and Engineering to recruitment

The use of the *tree diagram* in the Concept & Financing phase can improve the project planning. In our case, the *tree diagram* is used for clear identification of activities and for indicating logical and sequential connections between objectives, activities and subtasks.

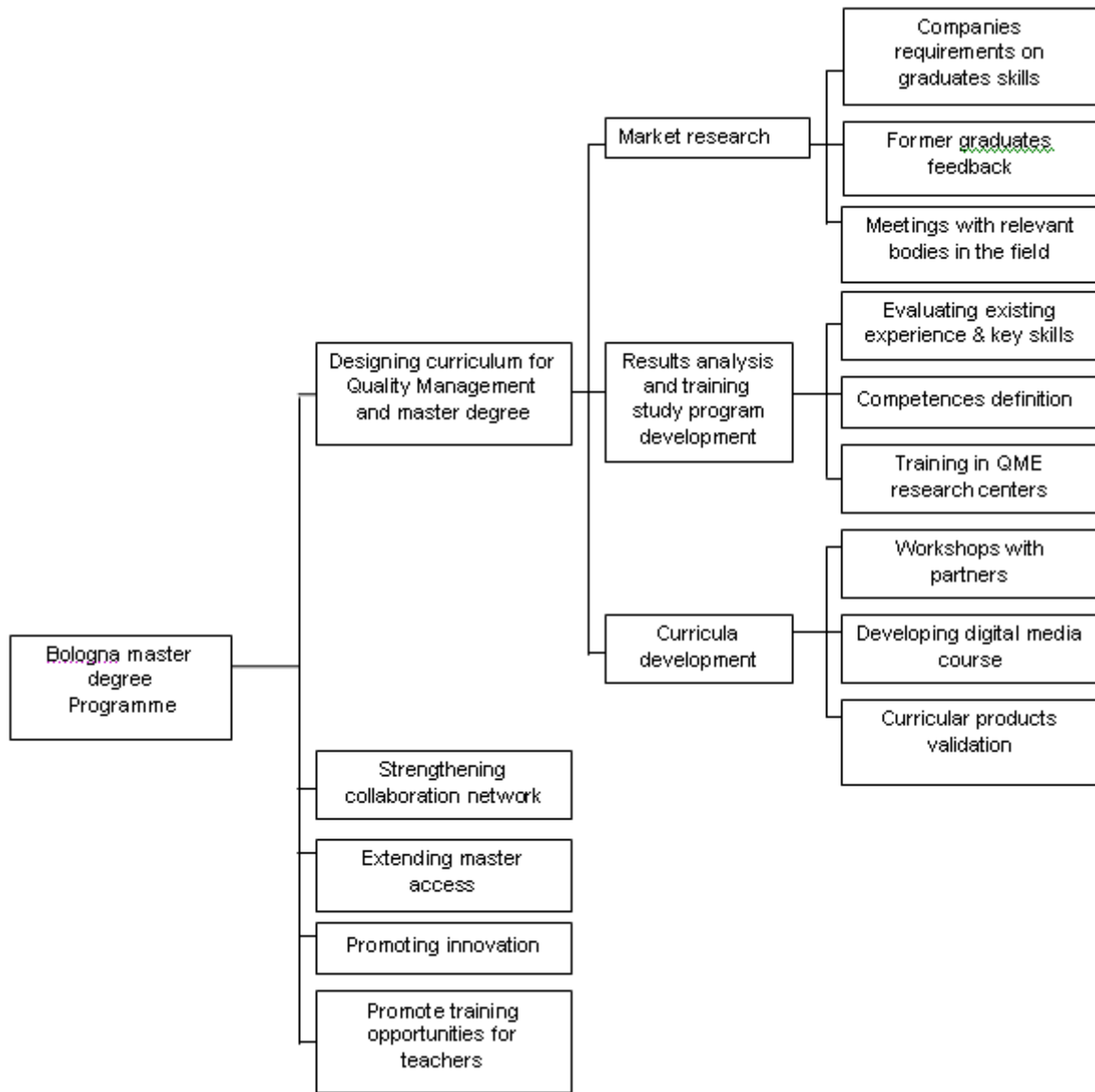


Fig. 3. Part of the project's tree diagram

In the Implementation phase of the project analyzed in this case study, the identified problems have been analyzed using proper instruments. Using *relations diagram*, the logical connections between problems and their causes and sub – causes has been identified.

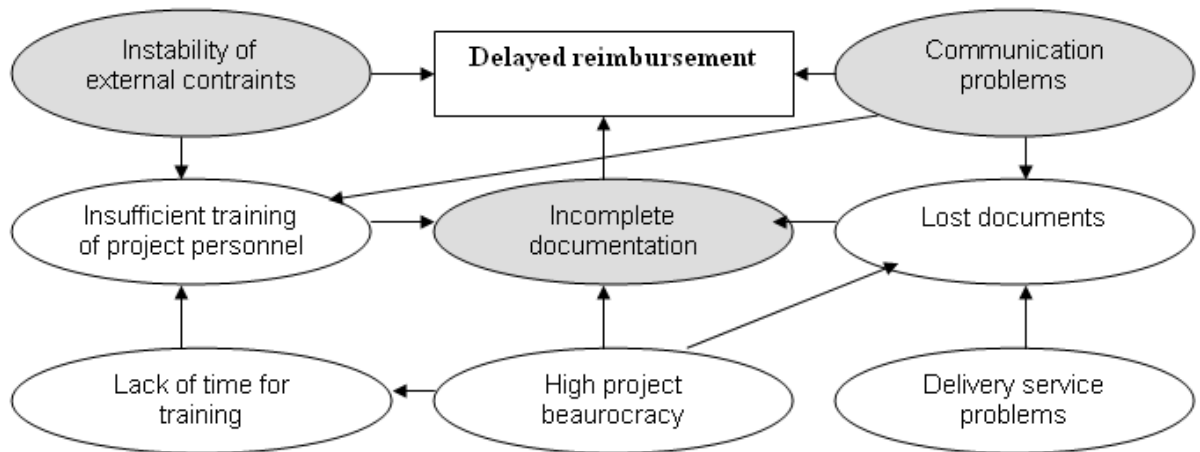


Fig. 4. Relations diagram

For assessment of objectives and monitoring the sustainability of the project, another instrument can be adapted. The *run charts* can be use to monitor the development of activities, to make forecasts, to discuss various scenarios that may occur and to take corrective measures to improve the project performance. In order to demonstrate the utility of this tool in order problem solving and prevention, an analysis on the project's target group using *run charts* as a monitoring instrument was performed, as shown in Fig.5.

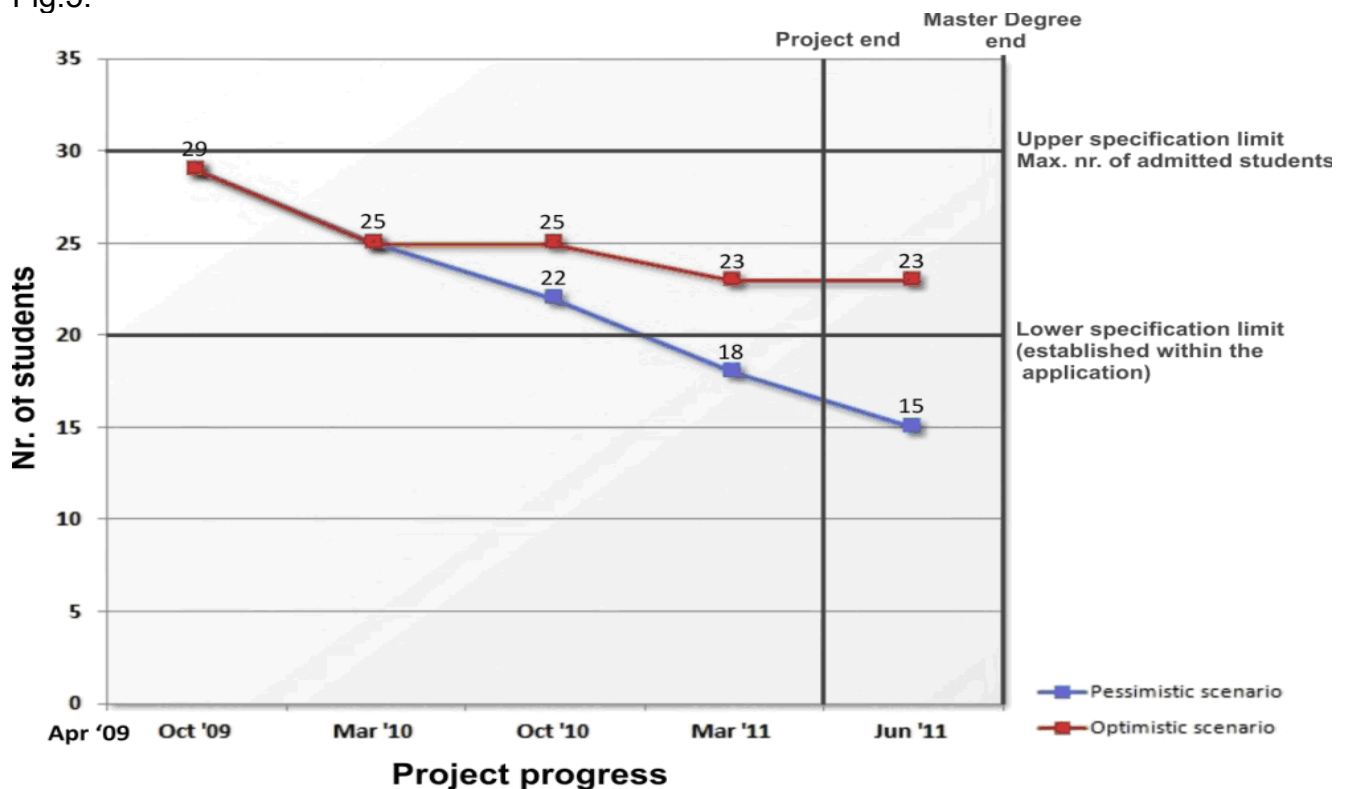


Fig. 5. Run chart of monitoring target group evolution

5. CONCLUSIONS

Public and private institutions and non-governmental organizations focused on project development both nationally and internationally. In these circumstances, the use of methods and techniques of Quality Management can represent a valuable mean that can be determinant for a project's success. The approach presented by the authors of this paper highlights the importance of using quality tools for improving project management. The specific techniques and tools can be used to identify, reduce and prevent project quality risks. Also, using the instruments mentioned above, problems that emerged, in order to prevent their further occurrence.

One can consider that the use and implementation of quality tools and techniques in the Project Management, as proposed by the authors in this paper, does not require large financial resources. Furthermore, these are relatively easy to use, are not very time consuming and can have a determinant impact in the project's performance.

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Assessing Quality in Enterprises Before and Twenty Years After 1989

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Abstract

Purpose – The authors propose a methodology for assessing the quality in Romanian companies before and 20 years after the fall of the communism, by means of evaluating the enterprises' quality in general and the capability to satisfy stakeholders in particular.

Methodology/approach – The algorithm developed by the authors uses several instruments like Analytical Hierarchy Process, Quality Function Deployment and Quality Management Maturity Grid, along with data provided by studies from several authors and institutions.

Findings – Compared to the enterprises before 1989, the present one have a higher capability of satisfying their stakeholders, but at the same time there is still room for improvement, the difference being relatively small for 20 years of transition.

Research limitations/implications – There is a consistent number of people who have doubts about the benefit of the capitalist system's economy. The results of this paper show an increasing capability of the present companies to satisfy their stakeholders. Unfortunately, this study alone is not enough to prove that economy is better than it was before – it only provides a hint of the evolution within the last two decades.

Originality/value – The design of the algorithm, the analyses and the evaluation represent the authors' contributions.

Key words: Quality, Communism, Comparison

1. Introduction

Romania is now facing a transition period, after more than 20 years since the fall of the communist regime, and so does the economy. Nowadays, when mentioning the era before 1989, despite the emphasis on the lack of innovation and efficiency in the communist enterprises, studies made by the Social Research Bureau (2009) show that 35% of the Romanians still think that the change of the communism was a bad decision for the country. Even more worrisome is the inclination of 18.5 percent of post communist youth (aged 18 to 29), which would prefer a return to the old regime – and their number is increasing. In this frame, the authors of this paper consider that a major influence is represented by the economic development within the last 20 years. Of course, many economic decisions seem wrong as we look in the past, but the economic, social and political environment are now very different from what they used to be several decades ago. Quality had different purposes for the Romanian enterprises for more than half of century after the Second World War. The economy in Romania had its downsides back then, but it also faced big growths at certain times. Good or not, the authors consider that the practices cannot be judged outside their politic and economic context. Therefore in order to evaluate and compare the quality approach in today's enterprises with the one that existed more than two decades ago, one needs a broader perspective.

The following paper studies the quality level associated with actual and pre 1989 enterprises. For the results to be relevant, an algorithm for assessing the capability to satisfy the needs of their stakeholders is used, by taking into account the demands of the stakeholders from now and then.

2. Romanian economy “before” and “after”

In order to present a clear perspective of the society, we need to describe the characteristics of the “planned economy” in general and the Romanian pre-1989 economy in particular, comparing it to the present one.

There are two major differences between the two concepts as presented by Leslie Holmes (2009):

- Ownership
- State involvement

Regarding the ownership, if today’s economy is dealing with a predominance of privately owned businesses, during the era before 1989 the Romanian state was the only shareholder in almost all factories, banks, and other forms of enterprise – a phenomena called “social ownership of the means of production” (Leslie Holmes, 2009) (known today as nationalization). Therefore, the state was very interested to get involved in the development of the economy, especially in the decision making process. If today the state only uses mechanisms to influence the enterprises’ development, during the communist regime the state used to plan and then manage the general evolution of the economy (this is where the term “planned economy” comes from). At the same time the state, as the main stakeholder, was entitled to follow its own interest even if this would contravene the interest of other stakeholders, like society or environment. This is the reason why Leslie Holmes (2009) describes the “poor environmental legacy as one of the worst failings of Communist central planning”.

As a general trend, even if the Romanian economy in the years following the WWII was focused on agriculture, a transition period started during the beginning of 1970s and the industry began to expand fast, sometimes with reported high annual growth rates. As Richard Staar (1984) stated, by the beginning of 1980s, the planned export rate rose to 80% and, as a result, the government was forced to place considerable efforts on control and discipline. Therefore, concepts of quality needed to be implemented. These decisions affected the way enterprises were controlled and improved their effectiveness in the next decade.

3. Proposed algorithm

The algorithm proposed by the authors of this paper is used to evaluate and compare the quality in the enterprises from the two types of economy, from the perspective of their capability to satisfy their stakeholders. The main stakeholders of an economy, considered along with their requirements, are presented by Daniela Popescu et al. (2008) as being the following: Market & customers, Law & regulatory bodies, Shareholders, Management, Personnel, Community/Society and Environment.

In order for an objective evaluation to be made, one has to take into consideration the fact that the importance of enterprises’ stakeholders had changed with the shift of the system. The authors consider that it is not possible to claim the pre ’89 economy as being better than today’s one or vice versa, because the hierarchy of the stakeholders was different. In order to evaluate the importance of the stakeholders as pre-

cisely as possible, an evaluation of the importance of their requirements for each of the two economies had to be made. Thirty associated requirements (Daniela Popescu et al., 2008) are therefore evaluated by means of Analytical Hierarchy Process (AHP), by taking into consideration, at the same time, the data provided by specific studies (Richard Staar, 1984 and European Commission, 2009) on the communist economy and on the capitalist one respectively. The choices made by the authors during the grading process are then verified regarding their consistency, by calculating the consistency index for each of the two evaluations.

After establishing the importance level of each requirement, the hierarchy of the stakeholders is obtained by summing the grades of their associated requirements. Following, the stakeholders' importance is deployed – as shown in the Figure 1.

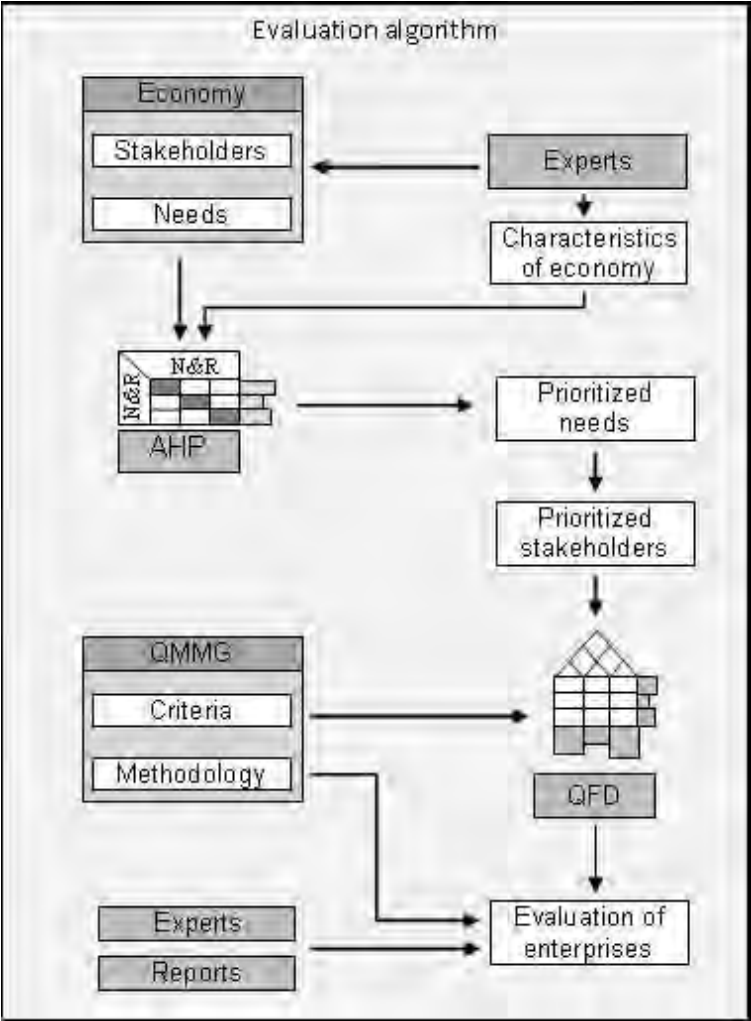


Fig. 1 Proposed evaluation algorithm

- into the evaluation criteria proposed by Phillip Crosby in the Quality Management Maturity Grid (QMMG), in order to observe the importance of each of the six criteria for the enterprises. The reason the authors chose to use this instrument, despite it being the precursor of Capability Maturity Model (CMM), was because the QMMG model approaches an enterprise from a general point of view, while CMM imply a perspective from the process level, therefore being too laborious to use in this context.

The last stage of the algorithm consists in the actual evaluation of the enterprises, using the Quality Management Maturity Grid and taking into consideration the results of the studies conducted by the European Commission (2009), Leslie Holmes (2009) and Richard Staar (1984). The evaluation’s result is represented on a scale from one to five and calculated using formula:

$$G = \sum_{i=1}^6 (g_i p_i),$$

Where “G” represents the final grade, *g* represents the grade of the individual criteria, pondered with its’ importance *p* and *i* is the number of the criteria.

4. Results

For the “planned economy” the results of the AHP prioritization, presented in the Figure 2, show that the most important stakeholders were the community and the shareholders – in this case the government, while on the last place stands the environment. Along with the capitalist system, a major change occurred: enterprises focused more on the Management’s requirements than before, while the interest on common wealth of the Community and Society dropped by 8%. From the environmental perspective for example, this fact is highlighted by other studies too, showing that “the commitment to economic growth at almost any cost typically meant the environment was a low priority, and most East European states had environmental problems by the 1980s” (Leslie Holmes, 2009). The prioritization of the present economy states that the environment shows an increased importance as a stakeholder but, the “average expenditure on environmental protection is, at the same time, substantially lower than the EU - average” (European Commission, 2009).

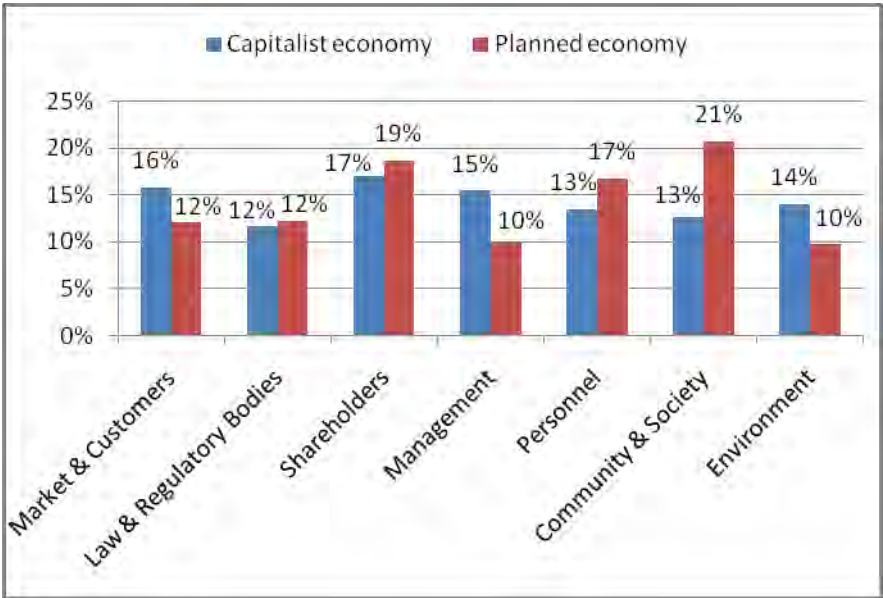


Fig. 2 Stakeholders' importance during the two economies

In order to verify the results of the Analytical Hierarchy Process, a calculation of the Consistency Index was made, resulting in an inconsistency of 2.44 percent for the pre '89 economy and 4.19 percent for the present economy evaluation – the maximum acceptable value is 10 percent.

Following, the deployment of the importance of the stakeholders into the evaluation criteria is made. The results presented in the Table 1 show an increase of present enterprises in ways of handling problem and quality improvement, and that they lay less interest in “Management and understanding attitude” – a further evaluation result shows a better score of the present enterprises at this criteria though.

Table 1. Importance of the QMMG assessment criteria

Economic system	Management and understanding attitude	Quality organization status	Problem Handling	Cost of quality	Quality improvement actions	Summary of company quality posture
Present	21%	8%	26%	23%	12%	11%
Pre- '89	23%	8%	23%	25%	10%	12%

Finally, the general assessment results show that the enterprises’ capability of satisfying their stakeholders before 1989 is ranked with a general score of 1.92 out of five, compared to 2.52 associated to the present enterprises. This show a general increase in interest of present enterprises towards satisfying their stakeholders’ requirements, but the average is still low, and there is enough room for improvement.

5. Conclusions

The transition period from the planned economy to the capitalist system in Romania is taking longer than anyone expected. The doubts of the people and especially the youth towards the “new” economic system is worrying, this being the reason why the authors consider that is important to give an objective comparison between the economic states of the two ideologies.

On the other hand, quality is defined as “the degree to which a set of inherent characteristic fulfils requirements” (ISO 9000, 2005). As the stakeholders had different relevance during the “planned economy” so did the requirements. The approach proposed by the authors of the present paper evaluates the capability of the Romanian enterprises to satisfy the needs of their stakeholders. By providing an objective comparison basis with the pre 1989 economy by means of quality, a realistic picture about how the present organizations evolved in their aim to satisfy their stakeholders is given.

The results show that some worries may have an explanation: companies nowadays reassessed their priorities towards other stakeholders like the environment, management, market and customers (derived from their wish to sell more of their products). This phenomenon has, as an immediate consequence, the enterprises’ loss in interest towards the community and society – probably one of the reasons why people have doubts about the new economic system.

However, the general assessment shows an increase with more than 30 percent in companies’ capability to satisfy their stakeholders, a proof that contradicts the 63.9 percent of the population that thinks that the economy is worse than more than 20 years ago. Of course, quality alone is not relevant for an entire economy, but it can show a direction of evolution. At the same time, the percentage may seem satisfying,

but the score shows that the Romanian enterprises still have a long way to go until becoming competitive from the perspective of quality, and that the progress is relatively small for twenty years of transition.

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Management of Change

Transformations Based on Capabilities in the Management of the Modern Military Logistic Systems

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Abstract

The purpose of the NATO transformation is the creation of those new military capabilities that enable the forces to sustain operations within the entire range of conflicts, the optimization of the logistic time (the time necessary for the preparation and provision of the logistic support of military actions) representing a desideratum of maximum importance. The role of modern military logistics derives from the necessity of integration into a unitary, flexible and coherent system of all the efforts of material support of the forces at strategic, operational and tactical level in order to provide the army structures with everything necessary for combat and livelihood, to satisfy the endowment requirements, to provide the medical assistance and the infrastructure during peace time, during crisis situations and during war. Through the Prague Capabilities Commitment, the leaders of the NATO member states assumed specific individual commitments regarding the improvement of national capabilities, in the shortest time possible, in four key operational domains of maximum importance for the entire range of operations of the Alliance, including in the field of defense against terrorism. These are: protection against chemical, biological, radiological and nuclear attacks; ensuring the command, communications and superiority in the field of information; improving the interoperability of the deployed forces and of the key aspects of combat efficiency; ensuring rapid deployment and sustainability of the combat forces.

Keywords: *capability, logistics, transformation.*

Conceptual delimitations

The concept of capabilities is very used in many areas of social life such as the technical, the economic or the military ones, but a purely theoretical delimitation of the term is somewhat difficult to achieve especially when the scope of the term is extremely broad.

By capabilities, Amartya Sen, a Nobel Laureate in Economics, understood the basic capabilities that enable people to exist/function. These are manifested by the need for instruments with features that provide the respective capabilities. For example, an armored vehicle is an instrument with transport characteristics. The transport characteristic of the respective military technical system can provide a group of fighters with the capability of moving from one place to another. A. Sen noticed the fact that individuals use objects as instruments, satisfying — by means of their functions/features capitalized on by the capacities of the individual — specific needs. An object can satisfy a particular need only to the extent to which an individual is capable to use it in this respect. Otherwise, it becomes worthless in light of that particular need. Capability appears thus as a set of instruments, their characteristics and the capacity of the individuals to capitalize on the instruments and their features to satisfy their needs. In the example above, if the respective military structure does not know how to use the tactical and technical characteristics of the respective technical means, it can not meet its transport, protection needs, etc.

According to Professor Constantin Brătianu, from the Academy of Economic Studies of Bucharest, the capabilities that can contribute to obtaining the competitive advantage must meet the following criteria: uniqueness, i.e. a unique capability or

that can not be substituted; rarity due to the relatively small area of material resources or of the human resources who have talent and creativity; the intrinsic value of the involved resources; the cost of imitation, which, the higher it is, the longer it takes for the imitation to occur.

Capability represents, in the research of Gheorghe Văduva, (2009), the ability to do a certain thing. In this sense, it also includes the ability to generate, design and achieve it, which involves a thinking stage, one of elaboration of a project, depending on the goals and objectives, but also on the possibilities and availability. In other words, capability means, simultaneously, the ability to conceive, to prospect, plan, carry out, as well as the existence of the means, methodologies, expertise and procedures necessary to put a plan, an idea, a concept into work.

The development of capabilities — the focal point for the transformation of the Military Logistic Systems

Today, when everything is in a permanent change and rivalry, competition has a special place among the preoccupations of the management of organizations. Starting from the premise according to which capabilities are the fundamental basis of the competition between organizations, then the effort to strengthen or develop the competitive advantage should be based on capabilities. Thus, the main focal point of transformation should be the strengthening and the development of capabilities. For the subject proposed for analysis we will use the concept as it was explained by the Allied Command Transformation, namely, as the ability to produce an effect which the user of certain goods or services needs. In a military context, particularized for modern military logistic systems, there are four main components of the capability: the processes (logistic doctrines), the forms of organization (the scheme of the logistic systems prepared for new contexts such as the network based logistics or the effects-based logistics), the people (the logistics management regardless of the level, the preparation and training in the field of logistics in accordance with the new requirements, logistic personnel) and the technologies (logistic bases, the implementation of advanced technologies in top level domains of knowledge).

A transformation based on capabilities involves, according to the opinion of the former deputy director for concepts and operations in the Office of Force Transformation of the U.S. Defense Department, John J. Garstka, the following elements and interrelationships:

- transformation is a continuous process that creates and maintains the competitive advantage;
- transformation includes the co-evolution of the processes, organizations, technologies and of the human capital, which, when considered together, strengthen the existing capabilities and enable the achievement of new capabilities;
- transformation extends the basis of the existing capabilities by creating new areas of competition and competences, thus giving a new value to the existing competitive attributes;
- transformation seeks to amend the current or future advantage within competition by identifying the changes of the basic principles or of the sets of rules that appear;
- transformation involves the identification of new sources of power which, if exploited, could enhance the competitive advantage;

- transformation focuses on the human component of change, developing leaders that can lead to change and that can create an organizational culture, which is open to changes and supports innovation, knowledge and risk taking.

In the same order of ideas, in an interview for Defense AT & L, the famous Rear Admiral Arthur K. Cebrowski, head of the Transformation Office of the Secretary of State for Defense of the USA, summarized his credo regarding transformation by an expression that has become famous: “Lead change or it will lead you!”. Continuing his idea, he showed that transformation is “an imperative for survival and for ensuring a competitive advantage in a changing world”, declaring himself a fighter against the idea of seeing technology as the sole purpose of transformation. Corroborated with the ideas stated above, transformation in the military field is a process that enables the support of the strategic interests. The engine of transformation is represented by the context of changes occurring in society, the transition from the industrial age to the information age, the changes of the characteristics of the war and the asymmetric threats. The response, in terms of technology, is channeled towards ensuring a high degree of availability in the information technology. The result is the essential changes occurring in the content of security, military, departmental strategies and in that of those that address risk and threat management. The fundamental requirement of transformation in the field of military logistics is the creation of an integrated logistic system with high mobility, providing the necessary logistics to the required place and in the required amount, at the appropriate moment, in accordance with the new realities of the physiognomy of military actions (for example, the network based ones).

The demarches regarding the adjustment of logistics to the requirements of the revolution in military affairs have been called revolution in military logistics and have included a series of new concepts and visions that have marked and are still marking the transformation not only of the structures and modalities of logistical support in the theaters of operations, but also of the national logistic systems in their entirety. The American specialists have argued that there can not exist a revolution in military affairs without a revolution in logistics. The revolution in military logistics brings up a new type of logistics, which is based on a new philosophy: “It takes mental agility because revolution in military logistics requires a speedy logistics” (Piggee, A.F., 2002). The revolutions in logistics should not be viewed as a single process, but as a repetitive phenomenon. The revolutions in logistics or, in other words, the transformations in logistics will occur whenever logistics has to adapt to the major changes of the forces.

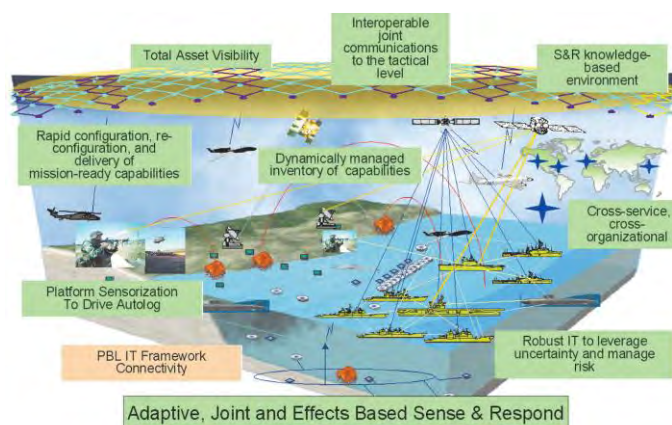


Fig. 1. Environment-based processing capabilities

It has rightly been stated, that today we live in a knowledge society. The military organizations have been forced to adapt to the new changes, in some of the cases, by means of the results of scientific research and innovation, even representing true vectors of the new society. In such an environment (figure no.1), the logistic systems must “reinvent” themselves, their reengineering being based on capabilities. Implicitly, the management of the military logistic systems undergoes substantial changes, both quantitatively and qualitatively, having bureaucracy and adhocacy as terminus points (tab. no.1) . The state of the art information logistic systems have replaced the classical reports, the logistic databases, having the possibility to reflect the actual tactical and technical characteristics of interest of the interconnected and sensorized networks consisting of equipment and technical systems and people. The application of the technologies specific to robotics and automation enhances the capability of the logistic systems. In this context, the need for the education and training of the managers of the military logistics based on “lateral thinking” becomes imperative.

Table. 1- Military Logistics Systems: Pre - and Post-Transformation

Pre-Transformation		Post-Transformation	
Linear Chains Use-Based Service Stovepipes Functional Stovepipes Title Ten-Driven Pre-Planned Poor Ops/Log ISR Integration Reactive Parametric Analysis-Based Hierarchical Monolithic Poor Scalability Not Flexible Consumption- Based Mass Attrition Service Perspective Efficiency Highly Optimized Brittle, Rigid Supply Chains		MODERN MANAGEMENT	Non-linear Networked Effects-Based Cross-Service Mutual Support Cross-Enterprise Joint Logistics Dynamic Continuous Planning & Execution Net Warrior Ethos Anticipatory Collaborative Networked Distributed, Modular Dynamically Scaleable Flexible Adaptive, Cognitive Speed of Effect Effects-Based Joint Coherence Effectiveness Effective Robust, Flexible Demand Networks
	CLASIC MANAGEMENT		

Lessons learned
and the best practices
to obtain
new capabilities

The complexity, the proportions and the importance of the transformation of military capabilities requires the initial establishment of a strategy or of a similar regulatory framework, which will guide the transformation efforts and will monitor the resources that will be invested to achieve the objectives of transformation. This regulatory framework should include guidelines and objectives, responsibilities for obtaining results and, at the same time, the management instruments necessary to guide the

activities and monitor the results. To the same extent, one must ensure the strict compliance with a set of principles:

- transformation must be led by important leaders;
- establishment of a coherent mission and of integrated strategic goals to guide the transformation;
- focusing on a set of basic principles and priorities from the beginning of the transformation;
- monitoring the implementation of each objective and the verification of the achieved progress since the first day;
- using a competitive management system to define responsibilities and to ensure accountability for change;
- establishing a communication strategy in order to share the expectations and the achieved progress;
- involving the employees in order to obtain their ideas and gain their participation in the transformation;
- designing an optimum organization.

Consequently, the transformation of logistics and of the management of the logistic system must occur at all levels (Incicaş, T., 2008) as follows:

- strategic, by: taking the decisions of transforming the logistic system as a whole; implementing the strategic plans for transformation; assuming the priorities in the development of logistics;
- operational, by: implementing a total system in terms of the visibility of the inventory; achieving the operational transformation of the logistic structures; implementing the operational systems for the distribution of the logistic materials and services to the forces engaged in operations;
- tactical, by: achieving the inventory of the troops; forming the logistic capabilities; introducing the new logistic equipment; achieving the operational medical support; forming and training the logistic staff and their appointment.

Conclusions

Achieving a correct match between capabilities and commitments requires a clear understanding of the strategic requirements. In its first 40 years of existence, NATO focused exclusively on the objective of collective defense, that of maintaining the military forces needed to deter and, if necessary, to reject any attack, at strategic level, against the Warsaw Pact aimed at the territory of any allied state. To achieve this, NATO had to possess a large number of conventional and nuclear forces, with a high level of operativity and optimized for short high-intensity campaigns conducted on the territory of the member states, especially along the eastern borders of the Alliance. Due to the fact that most of the forces were pre-positioned along these borders and they were expected to conduct combat actions at the place of deployment and to benefit, to a great extent, from the structures provided as support by the host nation, for most allies, ensuring the capacity of deployment and sustainability of the forces sent outside the national borders did not represent a significant concern.

The transformation of defense involves correlating concepts, organizations and technology development in order to ensure the capabilities base. The present change

is a challenge that requires an adequate and efficient response. Therefore, one can not accept the idea of transformation as an end in itself, without justification regarding the fundamental benefits it confers on the battlefield.

The military logistic systems are extremely complex, complexity given by the dimensions and considerable size of the logistic organization, by the diversity of products and services, by the uncertainty regarding the possibility and the urgency of the supply demand, by the continuous upgrading of the work technologies. The transformation of this system, as part of the transformation of the army, represents its profound change, in order to meet both future requirements and an innovative development of the system. Interconnectivity and interoperability extend beyond the military tactical and administrative domains of the information flow. When necessary, they include joint systems, combined with the commercial ones. From a military perspective, the logistic system, must, obviously, be interfaced with the command-control, but, at the same time, it must be interfaced with the digital armament systems so that they can order the movement and use available data from various sensors of these devices. This logistic system will interface constructively with other logistic and financial systems of other defense and public order structures and services. It will also connect with the global network of electronic commerce. This will enable the industrial partners to pursue and support the armed forces on the battlefield and will enable the logisticians to locate expeditionary distributors and to establish business relations with them.

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Management Changes in the Field of Medical Devices

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Abstract

Purpose – *The purpose of this paper is to provide an useful perspective to the Romanian companies activating in the field of medical devices, to be in line with the European demands.*

Methodology/approach - *We conducted studies about the national and European legislation, the national and international certified bodies and laboratories. Also, we made an in depth analysis of the national control and certification systems of the medical devices.*

Findings – *We present a strategy for choosing the proper notify bodies and certification schemes for the company's Quality Management System and its products, according to the company's needs.*

Research limitations/implications – *This research is limited to the actual Romanian and European legislation and can be influenced by further legislative changes.*

Practical implications – *We present the experience from our collaboration with a Romanian medical devices producer, SC DATRONIX COMPUTER SRL. This company has successfully certified its Quality Management System and products according to the new European demands.*

Originality/value – *During the adaptation process to the European conditions, we accomplished an optimal price/quality ratio.*

Key words: *Management, Medical, Devices*

Introduction

Romania's integration to the European Union took place on January 1st, 2007. The adaptation to the European requirements became a vital problem for all Romanian companies. The transition to the European demands brought new challenges, new requirements and a new vision of the whole organization process. This paper is focused on the major changes in the Romanian management of medical devices in the last 20 years.

What are the most significant changes?

In order to accommodate the management of medical devices in Romania to the European legislation, the two most significant changes were the implementation of a certified Quality Management System and the risk analysis as a continuous, systematic and documented process. This process should provide evidence of the essential criteria compliance during the whole existence of the medical device, from research, project design, production, usage to maintenance, end of usage and neutralization.

The risk analysis of the medical devices must answer at least the following aspects: meet the legal framework, minimize the risks of any kind for every involved party, provide a management tool to maximize the performance versus cost and present the correct decision on whether to use the medical device or not. The last condition can be accomplished via a maximum benefit versus risk ratio.

To meet all requirements, it is very important to substantiate the fact that risk analysis is more complex than damage analysis, which is performed with the hazard analysis. Therefore, the risk analysis must be conducted by interdisciplinary teams. Moreover, although initiated by the organization producing the medical device, the risk analysis involves all parties interacting with the device: medical staff, patient, maintenance

staff. The risk analysis can determine directives and restrictions that have to be followed by all persons interacting with the medical device. The following examples help to clarify this idea. Example 1: If a medical device needs to be called back in service, the producer or the company in charge with service operations can ask for specific set of documents. These documents are meant to attest the disinfection of the medical device before being sent to service. Example 2: The producer recommends the timeframe for the compulsory verification of the medical device. Example 3: Through recommendations, the assessments following the compulsory verification would be performed by the organization that is responsible for the service. Example 4: Through recommendations, the patient can be instructed about his actions before and after using the medical devices, such as nourishment or physical effort restrictions.

What is the new approach?

The management of medical devices in Romania before the adaptation of the European legislation depended on the national legal framework and authorized institutions for inspection, verification and certification.

The medical device had to be certified against the compliance of national standards such as STAS 11237/77. These include technical performance and security standards, technological standards of fabrication and inspection, design solutions, clinical standards concerning the proficiency of the method used by the medical devices. Furthermore, the standards should comply with the information related to the utilization, installation and maintenance documents.

Before Romania's admission to the European Union, there were authorized institutions for inspection, verification and certification of the medical devices. These were the national recognized laboratories for tests running and the national recognized commissions for clinical testing. The institution in charge with certification was the Office of Inspection and Maintenance of Medical Devices from Bucharest, SVIAM.

After the European integration, all European Directives became compulsory. According to European Directive EEC 93/42 and Romanian Law HG 911:2005 with later modifications, all medical devices should be classified in a risk category, to satisfy the essential requirements and also to be evaluated. Furthermore, all medical devices should comply with all standards in their field, such as electrical and mechanical safety standards, sterilization or biological compatibility.

Romania adopted the standards of the European Union. The standards in risk analysis are different for various application fields. An example is SREN ISO 12971: 2003 on Medical devices, risk categories for medical devices.

The European demands are specified in Council Directives, Standards and Recommendations. Under this new approach, we considered that in order to launch a product on the European Union market, we must comply at least the essential requirements. For the medical devices, these requirements are present in Romanian legislation through European Directives 93/42/EEC, 90/385/EEC and 2007/336 EEC, Council Directives 89/336 EEC and 99/46 EEC and Romanian Laws 176/2000, HGR 911/2005 and HGR 54/2009.

These conditions bring new challenges for the Romanian medical devices companies. The alignment to these new requirements demand technical, organizational and financial effort from the companies.

The technical effort is defined by the concept of risk analysis, the upgrades on the medical devices technical standards, the compliance with the new types of documentation and the fast growth of related activities.

The organizational effort is represented by the introduction of a certified Quality Management System, the demand of appropriate procedures for fast-growing activities and the establishment of new procedures for specific arising problems.

The financial effort refers to the organization of the technical and informational base and the provision of personnel, ensuring both the costs of the personnel involved in the change and the external costs.

Nationwide, the challenge was to create specialized bodies, to obtain and maintain their international recognition, to locally adapt to the Community legislation and harmonized standards, to translate all the standards, to build a credible system and mobile laboratories. The implementation of hierarchical relationships, under the Community Law, was the greatest problem in this process. This led to dispute between approved and accredited laboratories like BRML, The Romanian Bureau of Legal Metrology and RENAR, The Romanian Accreditation Association.

The harmonized technical standards are another major challenge. By law, they are property of ASRO, The Romanian Standards Association, which is the only body that can translate the standards.

At present there are almost 45,000 standards in use. The correct translation of the standards is a major challenge for ASRO that requires a long period of time.

The adoption of the Community legislation prior to accession to the European Union was authorized by laws and orders, but only few of them were correctly and completely implemented. This created confusion and allowed voluntarism.

The certification of medical devices

Being legally regulated, the medical devices also need to be certified. Regarding the certification process, the requirement is to bring evidence of the fulfillment of the essential criteria. Therefore, the certification process must determine the following aspects: what is being certificated, who demands the certification, who applies the certification, possible certification systems and lastly, the selection criteria.

To begin with, we have to determine the object of the certification. In the medical devices' field, according to the present legislation, the requirement is to certify the Quality Management System, as well as the product itself.

Secondly, we need to specify who demands the certification. Usually, all parties that collaborate to the construction, fragmentation, usage, maintenance of the medical devices must have at least the Quality Management System certification. For the Quality Management System to be accomplished, every organization needs to apply for the certification. The product also needs a certification which is requested by the

manufacturer. This applies only if the manufacturer has its headquarters on the territory of the European Union. If it is not the case, the request must be initiated by a legal representative of the producer, which must have its headquarters on the territory of the European Union.

Thirdly, we must exactly specify who applies the certification. The certification of the Quality Management System is provided by accredited certification companies and the certification of a product is ensured by notified bodies based on the analysis of the producer's documents, the evaluations performed by accredited laboratories and the clinical studies.

The fourth aspect we must settle is related to the potential certification systems. The certification systems for medical devices are specified in the **Council Directive EEC 93/42**. They coincide with the enclosure in the risk class of the specified medical device.

The last aspect we need to take into account in the process of certification is the compliance of certain criteria of selection.

Before starting any certification process, we need to answer several guideline questions, concerning the Quality Management Standard, the notify body for Quality Management Standard certification and the notify body for Product Quality certification.

The first task is to choose the right Quality Management Standard. Consequently, we must answer several questions. The first question is what is the reason to implement the Quality Management Standard. Such reasons could be the mandatory conditions, the market access, the image, the need for efficiency improvement or product quality improvements. Another question is related to the type of activity. There are general activities regulated by ISO 9001 and activities that have a specific quality management system, for example ISO 13485 for medical devices and ISO 14025 for laboratories. If the quality management system has to respect several standards, we must additionally answer to the questions "How can it integrate all required standards?", "Are there any contradictions in approach and terminology between the chosen standards? ".

The second task is to answer the question "What notify body is the optimal for the certification?" The most important criteria to select the proper notify body is: the notify body's image, geographical area of recognition, the pool of standards that can be certified with that notify body, whether the client demands a specific recognition of the notify body. If there is also a product awaiting certification, then we should also consider whether the notify body also offers product certification.

For the regulated domains, the product certification becomes only possible with the participation of a certified body. The selection criteria of the notify body rests with the producer company. They can choose a national or international notify body. The main aspects concerning the notify body responsible with the product certification are: the language for the legal and technical discussions, the costs with certification and periodical inspection, the transportation of the certification team. There are also other services to be considered when choosing the notify body, such as whether it provides laboratory tests or not.

The third consideration in the selection of the quality certification body for a product is the image of the notification body and its minimal chances for any future legislative problems. This is important, as the suspension of the notify body can result in the incapacity of putting the products on the market.

The selection criteria of the product certification system

For the optimal choice of the product certification system, we must take into consideration both the certification schemes and the costs. The certification schemes are divided into the risk classes I, II A, II B, III. They are presented in European Directive EEC 93/42.

The medical device company should take into account a combination of costs. Firstly, we need to consider the initial costs with technological acquisitions and Quality Management System certification. The costs of an accredited laboratory are significantly higher compared to a technological laboratory, because the first category also includes the implementation cost of the standard SREN ISO 17025 regarding the laboratory activity. Secondly, we need to determine from the beginning the follow-up costs, including system maintenance, as every Quality Management System is individually audited on a periodic basis.

Conclusions

The risk analysis is an important evidence for the product certification system, together with the laboratory trials and the clinical tests. It is also a compulsory process for the certification of any medical device. Furthermore, the risk analysis is a complex, interdisciplinary, continuous and time-variable process. It is highly connected with the product certification and a mandatory condition of the European legislation.

Following Romania's integration to the European Union, all the requirements concerning medical devices have aligned to the European ones. All medical devices should be certified again to apply the new requirements. A system of national institutions operating in the medical devices' field should be established, institutions such as notify bodies and accredited laboratories. The costs with the implementation of the new system of institutions can be optimized via a good choice of partners, including certified bodies and trial laboratories. For an optimal activity of the medical devices system at both company and national level, there is a constant demand of highly skilled personnel in the technical and legal matters.

In this paper, we presented the main challenges faced by SC DATRONIX COMPUTER SRL - company activating in the production of medical devices for electrotherapy - during the implementation process of the new European demands. For the optimal decision regarding the chosen Quality Management System and the Product Quality Certification, we made several analyses of the company, together with SENIOR EXPERTEN SERVICE from Germany. The analyses were organized during two ten-days' sessions. Also, we conducted research together with three international and national certification bodies. Our results consist of the implementation and certification of the Quality Management System SR EN ISO 13485 with a national certification body. Product wise, we accomplished the certification of the medical devices class II A. The medical devices were certified under the Total Quality Insurance System.

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Value Stream Mapping Analysis, Efficiency Methods of Operational Management

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Abstract

This paper aims to present a way to minimize losses incurred in a process, implementing an advanced operational management technique, known as Value Stream Map. It is based on systematic analysis of a process, a work practice, which we will illustrate implementing the Value Stream Map. We analyzed the manufacturing process of a tire manufacturing companies in Hungary, by exemplifying the stages Value Stream Mapping.

Based on video recordings we analyzed the technological process to identify losses, and then using advanced techniques eliminating them. Through this work i wanted to prove effective implementation of Value Stream Mapping in a manufacturing process, for which i have developed a detailed research work.

Key words: lean manufacturing, process, value stream map.

Introduction

By the middle of the XIX century, Japan began to significantly expand its economy, and currently is one of the most developed countries worldwide [1]. Lean is based on Taiichi Ohno's thinking, which initially focused on operations management in early 2000 and focused on health care [2]. Since April this year, the well-known Toyota Company became the market leader in automotive sales in the world. This is due to unique product lines, which is the base of Lean Management [3].

Considering the competition in technical and economic environment in which we operate is important to implement different management techniques to develop ourselves so that we continuously meet market requirements, such as technique is Lean Management

Lean Management is one business system that organizes and manages the development of production and relations with customers and suppliers [4]. Lean in other words means to produce more with fewer inputs: space, inventory, people, and time [5]. Companies over the years have implemented Lean Management principles have developed dramatically since the same human and financial resources were able to significantly increase profits (some companies managed to increase profits by 300-400% per year). Lean is a long term strategy.

For a company to transform into a Lean enterprise, organization and leadership commitment necessary involvement of all employees by creating a structure to coordinate efforts for knowledge, analysis and synthesis of existing data to find specific solutions and implement improvements. In this respect an important role is open to all employees (professional willing to develop) the special training which instructs all employees on Lean principle.

Process improvement and staff development must go hand in hand.

Losses arising in a process are in the form of: overproduction, waste, waiting, motion, inventory, logistics, unhelpful processes, which can be reduced by implementing techniques used in Lean Manufacturing.

The key terminology used in Lean Manufacturing, which reduced losses by them implementing are: Kaizen, Kanban, just in time, gen ba, ABC analysis, the 4M, the 5S, single minute exchange of die technique, Deming cycle (PDCA) product family, jidoka, Total Productive Maintenance -TPM, Poka Yoke, PUSH and PULL production system, etc.

Currently Kaizen is a continuous improvement strategy which is given significance, so economically, but political and social also. This strategy envisages gradual improvement (with small steps) and continuous quality products and services and the productivity and competitiveness, involving all staff. In Japan is called kaizen. (Kai - change or improvement, zen - good, well [6].

Kanban is a continuous supply of component parts so the workers (sellers) do not go missing what they need where they need timely.

Just in time (JIT) production system is one that produces and delivers just as much as needed, only when needed and only the necessary amount, according to customer request.

PULL production system involves pulling the product manufacturing line rate imposed on the client (figure 1), eliminating overproduction, this system is opposite PUSH system (figure 2).

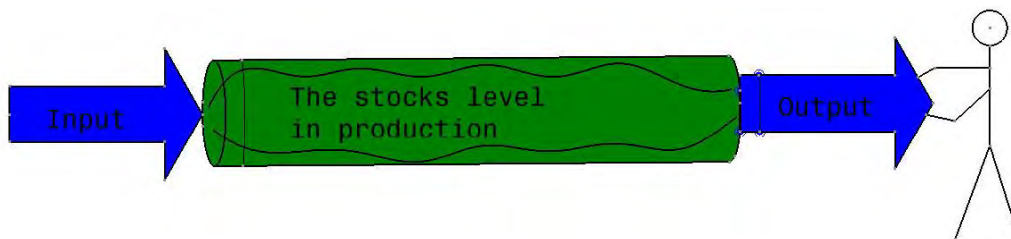


Figure 1. "Pull" system illustrated

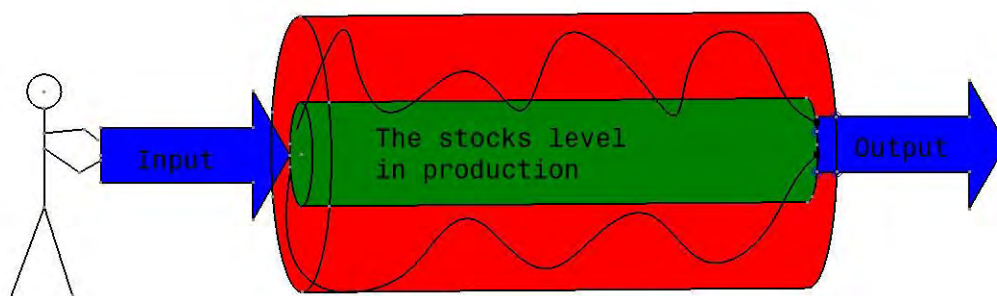


Figure 2. "Push" system illustrated

All these techniques mentioned above, is working together against eliminating losses that are seized from the execution of Value Stream Map.

Losses occurring during a process are found in 95%, only 5% profits (value-creating activity - activity for which the client pays, illustrated in figure 3).



Figure 3. The percentage of the losses and profit

One aspect of lean thinking as the organization of standard instruments with Value Stream Mapping and 5S, which are available to create value [7].

Value stream mapping was the main tool used to identify the opportunities for various lean techniques [8, 9]. The most effective techniques used in Lean Management is Value Stream Mapping (VSM), which showed a remarkable efficiency to increase productivity.

To understand how this method is working, just start to explore each word in name, starting in reverse, namely: value, stream, map.

- By end-customer perception of value is defined for the requested product or service provider. In other words, what value is given by the customer is willing to pay for a product or service to satisfy needs. If he would say that the share price is unnecessary operations, waiting times or to correct nonconformities observed before delivery, most likely would not agree to pay for the additional consumption of resources.
- Wherever a product or service made for customer, is a value stream. To provide a product, usually through a production process that includes the sequence of operations and production activities necessary. Flow value thus refers to all operations and activities to be carried out in successive order to create adequate value to the customer. Because I talked about loss, it is clear that no production process is not perfect. Thus, a perfect process means a process which includes only items that add value and determines a process capable, available and appropriate.
- To describe the situation (existing or desired), use the map as a tool for graphical representation of the process. To map the current state, the principle is the observation process used to achieve a particular product or providing a service to record specific date (operations performed, outcomes, performance indicators, parameters of work, workplace organization, information necessary, etc..) and representation by means of graphic symbols of all the results of these observations.

Currently we have many specialized publications that confirm effective implementation of VSM. [10, 11, 12, 13]

By carrying value stream map these losses are highlighted by using different colors specific of the technological process (see figure 4).





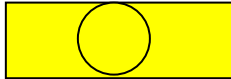

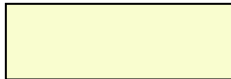



VSM symbols	Significance
	logistics
	control
	activity
	defect
	creative activity values
	stocks
	Proposal
	Limit of process
*	Estimated value
	Easy interventions
	Operating plan

Figure 4. Value Stream Mapping symbols

The central aim is to analyze a process, to exemplify the value stream map (VSM), and to implement various techniques of operational Management for eliminating the losses incurred in process.

VSM is a tool commonly used to help understanding and continuous improvement of material and information flow within organizations. Value Stream Mapping is a simple technique, easy to understand for those who work in process and provides a realistic picture of current problems

As with any lean management toolset the principle aim of Value Stream Mapping is to improve processes. This is achieved by highlighting areas of waste within a process and therefore enable businesses to eliminate these activities. Value Stream Mapping also has the benefit of categorising process activity into three main areas - value add, Non value add and waste.

VSM allows template creation and printing to support both data collection and use of the templates on the wall for group activity. These templates make it simple to capture the resulting map in VSM for calculation, modification, visualization and sharing [14].

In the figure 5 we present how we start value stream mapping.

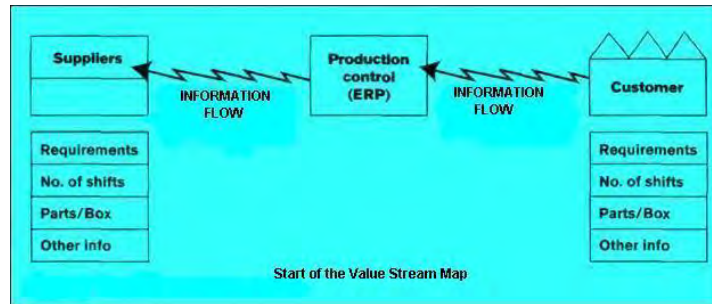


Figure 5. Start of Value Stream Map

After detailed analysis of the process we will create value stream map of the future that can capitalize on opportunities for improvement identified in the current map in order to achieve an advanced level of performance.

VSM is a map describing the current state and future of a production system that allows those who use this technique to understand the initial state and which documents must be eliminated.

All these techniques such as business cases, recovery periods and other management tools that do not add value to products can not be judged by VSM technique, that can highlight and distinguish the true value of a product.

VSM is a map that outlines the current and future state of a production system, allowing users to understand where they are and what wasteful acts need to be eliminated [15].

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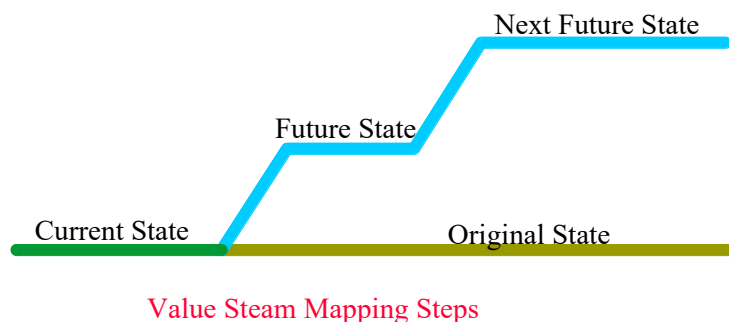


Figure 6. Value Stream Mapping Steps

The value stream includes the value-adding and non value-adding activities that are required to bring a product from raw material through delivery to the customer. In other words, VSM is an outline of a products manufacturing life cycle that identifies each step throughout the production process. The overall goal of VSM is to move from batch and push to one-piece flow and pull through the entire value stream. The ultimate goal is to design and introduce a lean value stream that optimizes the flow of the entire system - from information, to material, to finished goods arriving at the customer. Value stream mapping always starts with customer demand because it is what triggers the process by which we obtain a certain product.

An effective production process delivers what the customer wants. Profit contribution mapping extends the value stream mapping concept and introduces financial measures to identify where profits are made during production and where they are lost [16].

Object

In this paper we sought to identify losses that occurred in the technological process exemplified by VSM, and after a thorough analysis of these losses removal techniques used in the Lean Manufacturing.

Methodology

For using this tool we have to implemented a set of rules:

- map should include all actions (both value added, as well as non-value added) currently required to make the product to cover specific key processes.
- usually use a pencil and paper to draw a value stream map. But this is just the first step - next step concerns the current state analysis, the embedded solutions to improve the future state map, to prepare and implement an improvement action plan (with timelines, responsibilities, resources required and targets, established as clear).
- to implement only those steps which are considered important
- to establish the value stream map is designed so the flow of materials, as well as information flow, process of making specific product or service considered, from downstream to upstream process.
- being a cross-sectional approach is usually necessary to work in a multifunctional team to understand and figure the situation observed.
- the result sought is to determine the proportion of working time that adds value to the total time required for product or providing a service, from customer order receipt until delivery.

Knowing the real situation can begin analyzing the problems found, to find causes that give rise to losses that prevent a steady stream, found that the following questions:

- 1) It complies with the flow during the cycle?
- 2) Workstations are balanced in terms of work load?
- 3) How to ensure a continuous flow of materials? What is the minimum possible batch?
- 4) How to simplify the flow of information?
- 5) How to reduce redundant information flow?

And proposed solutions to the causes of these problems fall into an action plan for improvement to enable the transition to a new situation, described by a future value stream map. Along with viewing the entire process can clearly see that there are losses during the unfolding of the entire process.

VSM may apply if you want to analyze a set of activities, from customer order to satisfying the client, but can also apply if you want to look at some stage part (phase) of a set of activities. In this case, I have examined a process, that road that you travel a worker to make a semi. This analysis was carried out in a tire manufacturing company in Hungary. Based on a video made inside the company, I watched every stage by the operator, starting from a blank registration barcode to obtain the finished product (Annex 1, figure 7).

Value-stream maps can be drawn for different points in time as a way to raise consciousness of opportunities for improvement [17], [18].

It is important to mention that this development of the value stream map (Value Stream Map), is analyzed in the perimeter of a single production cycle, from registration activities to obtain the finished product.

After implementation of VSM (present VSM) for technological process we obtained (figure 8):

- Percentage of losses (Muda): 92,42 %;
- Percentage of profits (value-creating activities): 7,57 %;



Fig. 8. The lost and profitable time in the present Value Stream Mapping

The lost time: 67,08 minute (for this the customer does not pay)

The profitable time: 5,50 minute. (for this the customer pay)

After identifying the losses that occur in this process, we created an ideal value stream map, which will eliminate light losses, implementing several techniques used in Lean Manufacturing (Total Productive Maintenance, Just in time, Kaizen, etc.)

Losses we can eliminate in this process are:

- 1 Stacker absence 13 min 20 sec.
- 2 No note the stacker 1min, 20sec
- 3 Missing rubber band 34 min 51 sec.
- 4 Wrong Fixing Of Band 7sec
- 5 Failure, Fell one sensor part, Maintenance delays 3 min and 30 sec 20m
- 6 Other side fell sensor 1 min 20 sec
- 7 Fall sensor 44 sec 20m

After eliminating these losses we obtained (future VSM, figure 9):

- Percentage of losses (Muda): 68,35 %;
- Percentage of profits (value creating activities): 31,65%.

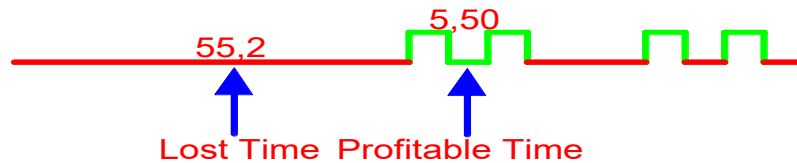


Figure 9. The lost and profitable time in the future Value Stream Mapping

The lost time: 55,2 minute (for this the customer does not pay)

The profitable time: 5,50 minute. (for this the customer pay)

Discussion and conclusions

From the research i have done in this process, using Value Stream Mapping to exemplify the process i constat following conclusions:

The percentage and time of losses in present Value Stream Mapping is 92,42 %, this means 67,08 minutes.

The percentage and time of losses in future Value Stream Mapping is 68,35 %, this means 55,2 minutes.

The percentage and time of profits in present Value Stream Mapping is 7,57 %, this means 5,50 minutes.

The percentage and time of profits in future Value Stream Mapping is 31,65%, this means 5,50 minutes.

The data mentioned above we see that I have gained with 24.08% profit after implementing VSM and Lean techniques.

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Annex 1

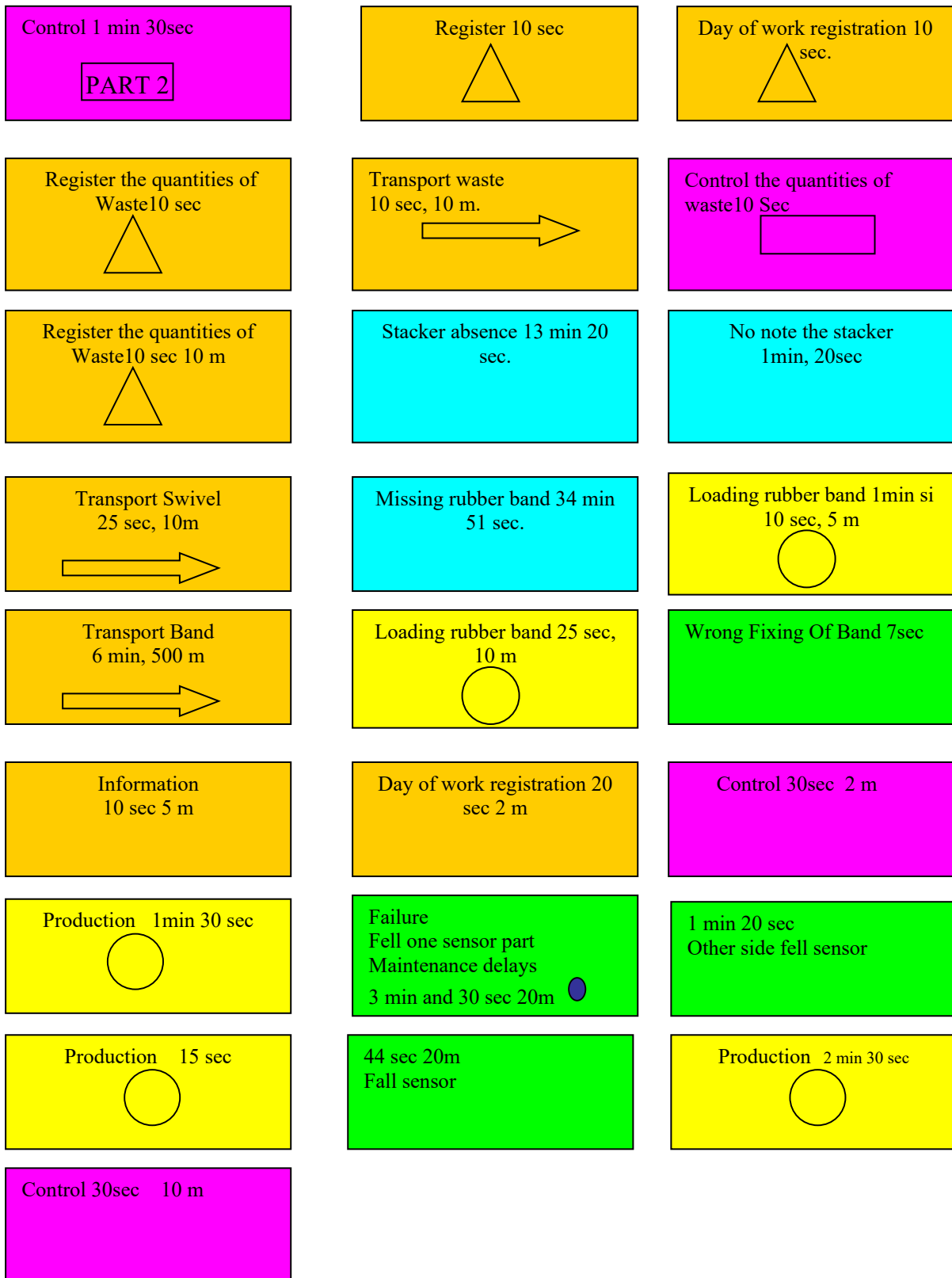


Fig. 7. Unfolding Value Stream Mapping

East – West Mobilities Means of Training of Trainers in Management

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Abstract

This paper presents conclusions of the author, on the one means of achieving this objective: East-West mobilities of teachers who teach management.

I also consider the extent to which mobilities east - west of the teachers had the effect of changing the management training, reducing the distance between the West and our country.

In order to obtain information about the subject, the author developed a structured questionnaire in three parts: 1. period, destination, route, towns and context driven: the program, funding source; 2. point of view vis-à-vis a number of factors related to mobilities issues, both a quantitative and qualitative; 3. Most powerful impression on people, places, countries, systems, events.

The questionnaire was sent to about 80 colleagues, teachers in economic engineering.

The information gathered is analyzed both quantitatively and statistically and also takes in consideration practical aspects that can offer us an accurate and complete image on the issue.

Research is not that of generality, being punctual approach to the issue mentioned in terms of peer group consult.

The paperwork presents some psychological aspects of mobilities and examples of respondents' most visible impressions about countries, people, places, events, etc..

Originality/value can be appreciated both by the basic idea of the work and the wording of the questionnaire items.

Key words: *East-West mobilities, questionnaire, teach management.*

Introduction

In 1995, the first movement in Western Europe, in a discussion with a former student from Iasi, who is head of department at a company in Paris, on mismanagement practiced by Romanian managers, he said:

- Taking a manager in the West and give him to lead a Romanian company he will do worse than Romanian manager.
- Why? I asked.
- The management of the West is more programmed than that of Romania. Me - told me Fathy – I'm manager because I'm leading a team, but in fact I'm not taking any real decision. I have specifications provided in detail for all the situations I can face and decisions to be taken in these situations, so only if I'm completely crazy I will decide otherwise than write! In Romania, managers are constantly facing situations for which there are no procedures, no routine, so that almost all the time the decisions are not by the rule.

Since 1990 until now, Romanian managers are confronted with changes in legislation, in status, in the system, changes which allowed them to develop and validate a coherent and complete set of procedures helping them in taking the correct decisions.

In recent years, our acceptance of EU membership, began to appear alongside it, especially in public proceedings, referring to the educational environment and research, which gives us hope for the working approach of the West . But there are many changes now, which makes this task still difficult and the results are not on the expected level.

When I was first in the U.S.A I had a shock, as many others. We encountered a system clock function, but a clock that spins faster than ours. Taylor is now across America. The first word I learned in the States was go! Cincinnati airport staff simply chasing us to process all passengers!

These are just two small examples suggests large opportunities that we had to learn management through mobility.

East-West mobilities were achieved in an organized way, under projects financed from various sources, such as: TEMPUS - PHARE, Leonardo da Vinci, World Bank ,Phare pre-accession, EU structural funds, funds of the Education and Research Ministry, other government bodies.

I also participated in over 15 trips, our experience was great.

Countries that we visited were: France, Italy, Austria, Germany, Spain, Greece, USA.

Rersearch Methodology

In order to obtain information about the subject, I have developed a structured questionnaire in three parts: 1. period, destination, route, towns and context driven: the program, funding source; 2. point of view vis-à-vis a number of factors related to mobilities issues, both quantitative and qualitative; 3. Most powerful impression on people, places, countries, systems, events.

The questionnaire was sent to about 80 colleagues, teachers in economic engineering. I received back 23 answers.

The information gathered is analyzed both quantitatively and statistically and also takes in consideration practical aspects that can offer us an accurate and complete image on the issue.

Key findings

Table 1 lists a few of the respondents answered the questions in part II of the questionnaire, ordered downwards the average responses on a scale of 1-5 (1 - totally disagree ... 5 - totally agree).

Following the questionnaire administered to my colleagues, I present their personal impressions, and also their main findings.

Table 1 Survey results

	Total disagree	Partly disagree	Neutral	Partly agree	Total agree	Average
Mobilities have achieved professional purposes	0	0	0	5	18	4.782609
Mobilities have enriched my professional knowledge	0	0	0	7	16	4.695652
I tried to apply everything I learned in the mobility	0	0	2	5	16	4.608696
I came into contact with Western civilization	0	0	3	4	16	4.565217
I knew vestiges of Western culture and civilization	0	0	0	10	13	4.565217
We were welcomed and treated	0	0	3	6	14	4.478261
I met people with diverse culture	0	0	5	5	13	4.347826
I learned new methods and training techniques	0	0	0	16	7	4.304348
We have access to valuable information that we could not get in our country	0	0	5	6	12	4.304348
We set up some partnerships and lasting friends	0	0	0	17	6	4.26087
We completed the implementation of a mobility project	0	2	3	5	13	4.26087
I met Romanian value, making the country honor and create good image in the West	0	0	5	8	10	4.217391
Mobilities allowed near the Romanian education system of the Western	0	0	5	10	8	4.130435
I improved knowledge of foreign languages	0	0	6	10	7	4.043478
I met compatriots who make us a bad image in these countries	0	2	2	13	6	4
I made useful contacts with universities in these countries	0	4	3	7	9	3.913043
This project is currently operating successfully	2	2	2	8	9	3.869565
I was assisted in this task by students	0	0	7	13	3	3.826087
I believe that management education in Romania has gained much from my mobility	1	2	4	9	7	3.826087
I was assisted in this task by colleagues	0	0	10	8	5	3.782609
I was assisted in this task by driving	1	2	8	5	7	3.652174
I was disappointed with the image of Romania in those countries	2	3	6	10	3	3.521739
I visited Western companies	3	5	4	4	7	3.304348
We obtained financial resources from the mobility	7	2	2	6	6	3.086957
I spent more money with these mobility	2	6	8	4	3	3
I felt bad that we are seen by Western	2	5	12	4	0	2.782609
We felt unprepared for entry into the civilized world	8	2	5	8	0	2.565217
I understand that between Romanian and Western system known insurmountable differences	7	6	6	3	1	2.347826
I had some behaviors that seem now not just a venture	11	3	4	5	0	2.130435

We encountered resistance from students in this task	8	7	5	3	0	2.130435
We encountered resistance from the university leadership in this task	13	3	4	3	0	1.869565
I found the correct attitude not just the hosts during mobility	14	4	3	2	0	1.695652
Have not quite found the right attitudes from colleagues during mobility Romanian	14	6	3	0	0	1.521739
I had problems with officials in our country about these mobilities	16	5	2	0	0	1.391304
I had problems with officials of those countries	16	5	2	0	0	1.391304
We encountered resistance from colleagues in this task	15	7	1	0	0	1.391304
Upon returning to the country I forgot what I learned while traveling	17	4	1	1	0	1.391304
Mobilities have created my family problems	18	3	2	0	0	1.304348
Mobilities have created problems with my service	19	3	1	0	0	1.217391

1. Mobilities have achieved professional purposes.

I saw and understood how the activity is going on in these countries, I noticed differences to our country, we tried to apply as many as we learned. In the IUT from France, but also in universities in Great Britain, Germany and Greece were founded Colleges of management and production organization that have worked successfully in our universities.

In Ferrara, Italy, I was initiated into the work of trainers in practice enterprises activity undertaken in the Technical University of Iasi, Cluj, Timisoara and the University of Sibiu. World Bank-financed projects completed this mobility by creating the National Network of Practice Enterprises of Universities from Romania. [Condurache et al. (2002)]

Continuing Education and Training Centers of the four collaborating universities, from established and TEMPUS projects have worked and work today, representing a first for our universities, at the time of their formation.

Leonardo da Vinci projects have resulted in the creation of valuable educational programs in our universities, training a large number of specialists as trainers simulated business, developing teaching materials reference [Condurache et al. (2006)].

Opinion of my colleagues is shown in Figure 1

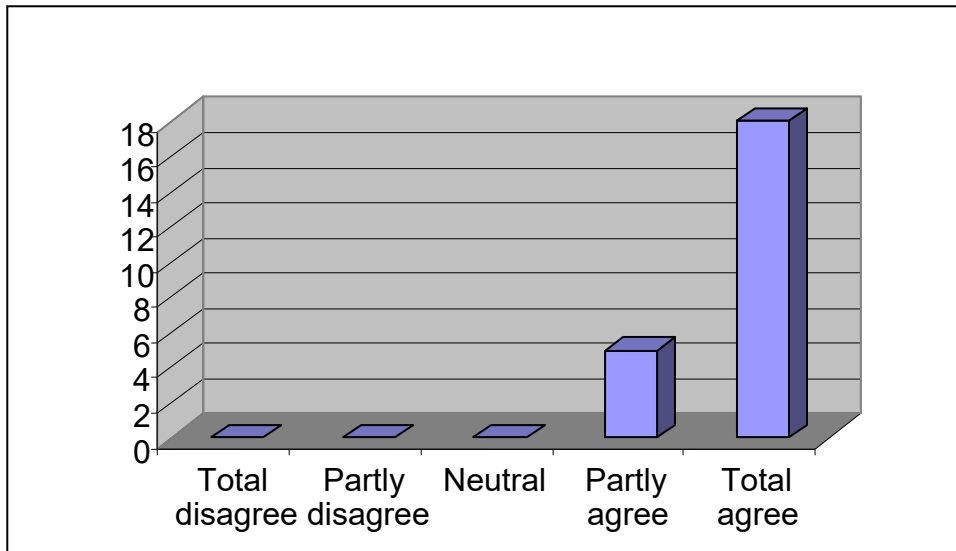


Fig. 1. Mobilities have achieved professional purposes

2. Mobilities have enriched my professional knowledge.

The vast majority of my colleagues considered that they enriched their professional knowledge (Figure 2). I personally learned of Value Analysis and Engineering, which we later used in my doctoral thesis [Condurache (1997)], I learned the method of scenarios, used in present in the teaching activity, have progressed much in the JIT, I have gained most in the Practice Enterprises.

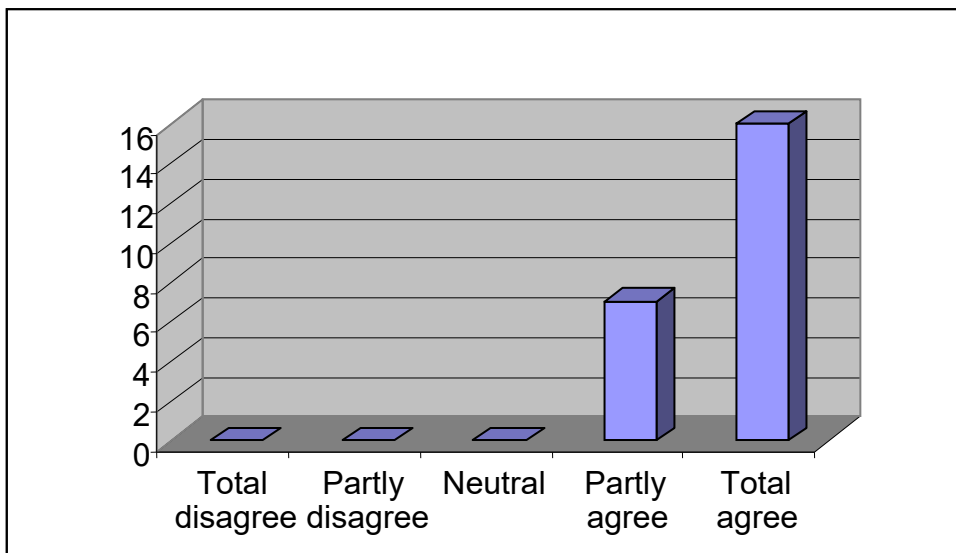


Fig. 2. Mobilities have enriched my professional knowledge

3. I tried to apply everything I learned in the mobility.

From Figure 3 it appears that a comfortable majority of my colleagues is fully agreed. I support the strat up of College of organization and management of production, the national network of Practice Enterprises, have contributed to the start up and operation of Continuing Education and Training Center, I participated in four international practice enterprises fairs.

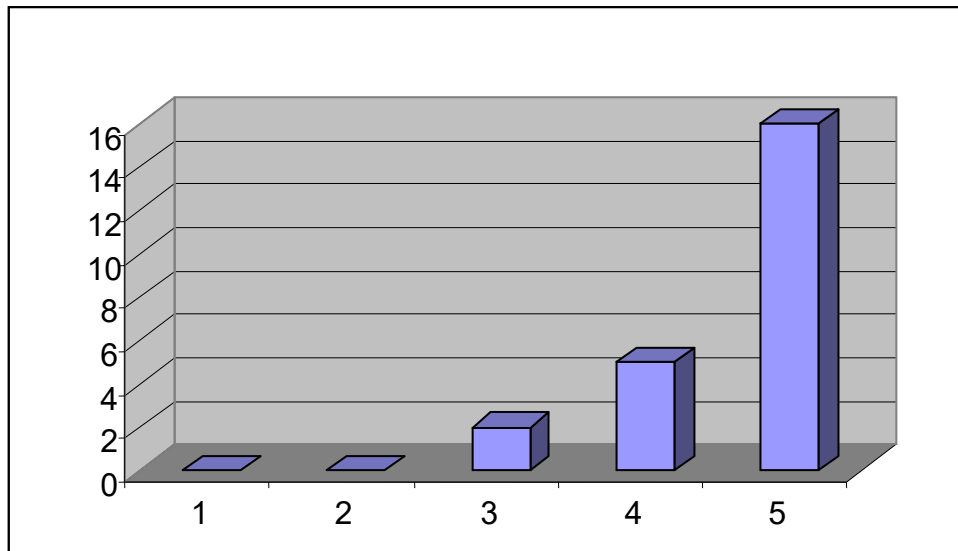


Fig. 3. I tried to apply everything I learned in the mobility

4. I came into contact with Western civilization (figure 4)

Mobilities were excellent opportunities to acquaintance Western civilization, the economic environment and academic figures in those countries. I could enrich my knowledge, restricted until then to formerly socialist countries. I managed to understand better what is the Romanian civilization in world wide civilization. It is very important to understand that American people, being big children with no history, the French as exponents of a people conscious of their historical value, the Italians as some of our cousins, the Greeks like our brothers in history and tradition.

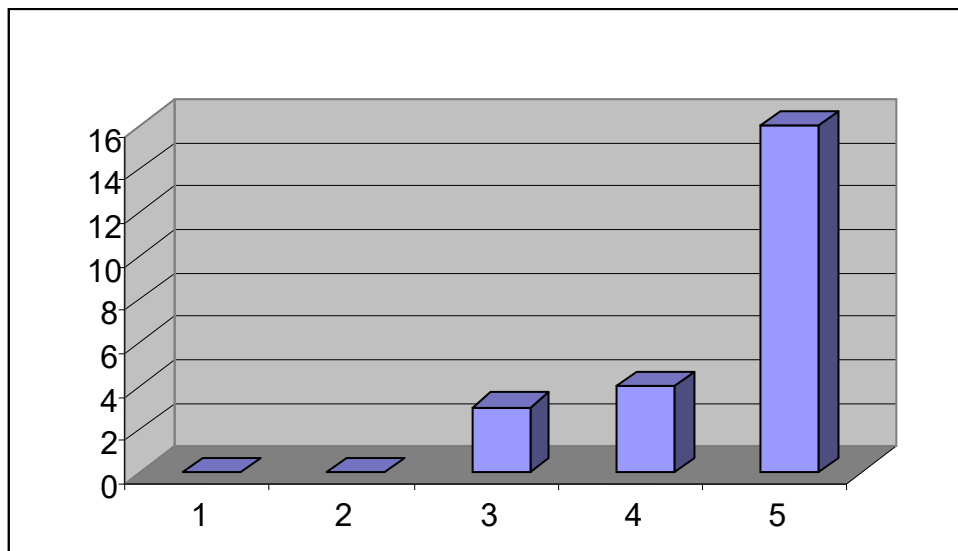


Fig. 4. I came into contact with Western civilization

5. I acquaintance vestiges of Western culture and civilization (figure 5).

In all mobilities I tried to visit significant places for the history and artifacts of those countries and for areas of special natural or human history that also contributed significantly to the enrichment of knowledge and experience baggage previously held.

Italy, France, Greece remains for me the richest countries in culture. I enumerate in a personal order: Vatican, Louvre, Versailles, Florence together, Monte Carlo, Pisa, Knosos, Santorini, Athens, San Marino, Heidelberg Loire Valley, Sagrada Famiglia, but the list could continue more and more.

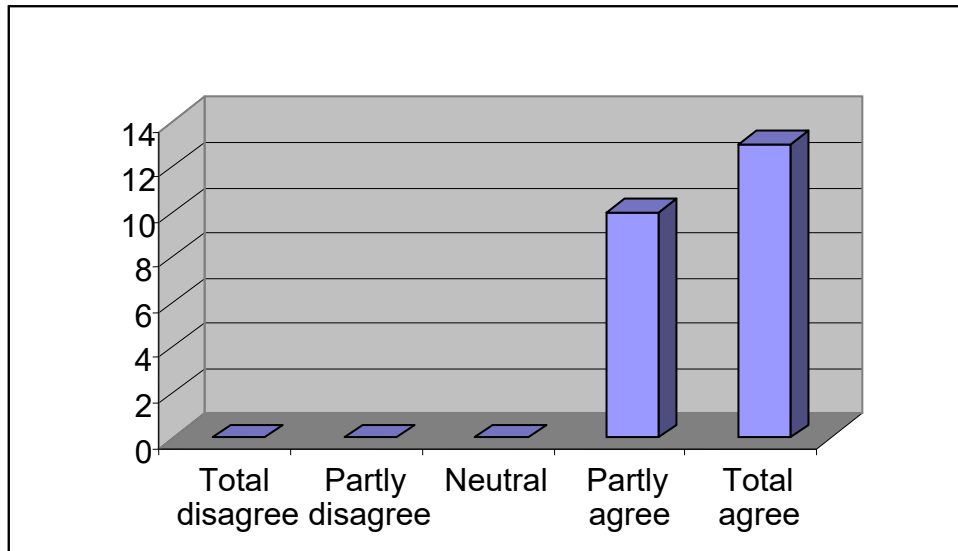


Fig. 5. I knew vestiges of Western culture and civilization

6. We were welcomed and treated (figure 6).

The fact that there are colleagues who have given 3 grade to this item, makes me less sore that Romanian hospitality is above the western one, but we must agree with the fact that Western civilization and culture compensate some flaws in this area.

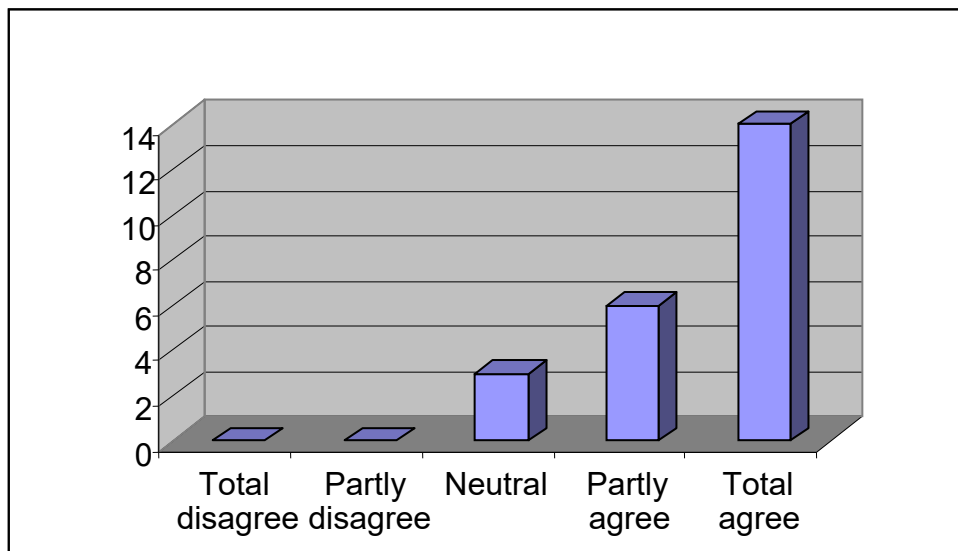


Fig. 6. We were welcomed and treated

7. I met people with diverse culture (figure 7).

I think it is an important chapter in the author's approach, because without people there is nothing. My colleague, Michael Romeo Ciobanu met in Crete the famous

Bernard Roy, author of no less famous ELECTRE method. As a consequence of this fortune, we both became members of the MCDA Group, a world wide prestigious professional society. I met Professor Michael Wilkinson from Derby, UK. Keep all a wonderful reminder about Professor Alain Curtois from Annecy, France. Professor Vassillis Moustakis of Crete is a very good friend of us, together with his colleagues. Professor Cristian Robledo from ISTI Angers-France, Professor Karl Hayo Siemsen of the University of Emden. Renowned expert in human resource management - Robert Mathis from USA is coordinator of the treaty, to which we are co-authors.. As a personal note, I wish to quote the man who in 1995 was head of logistics department of the IUT Evry, France - Mr Racotomalala! Is the most interesting name I've heard. Răcoto'mălălă actually read. Is an eminent professor from Bangladesh! Would be a great lost to not mention here MRrMusolesi Alberto, you all know him, or Mrs. Maria Benages from Barcelona.

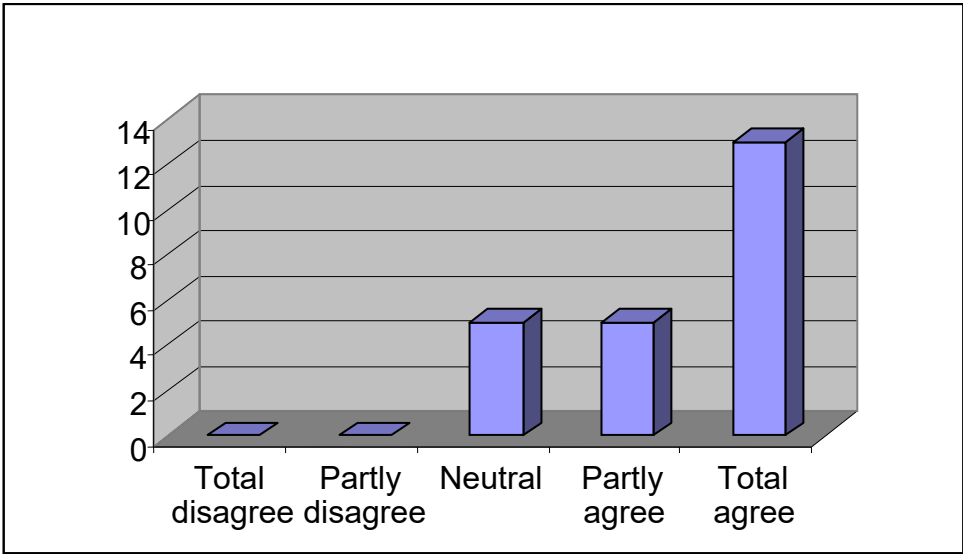


Fig. 7. I met people with diverse culture

8. I learned new methods and training techniques.

The answer given by my colleagues, mostly agree, but not agreed by all of them (Figure 8) is correct. Many of our management methods were known in the literature. There are also ways that we first met. Practical methods of training: “learning by doing”, we learned from mobility, especially those of Italy. Preparing students with practice firms is very useful for professional work as a way of making students practice. Obviously, my colleagues have learned many other methods. Quote: neuro-fuzzy algorithms, Microsoft Project, Project Management, Functional analysis, modeling flexible manufacturing systems using the CQN model, case studies by research in the field.

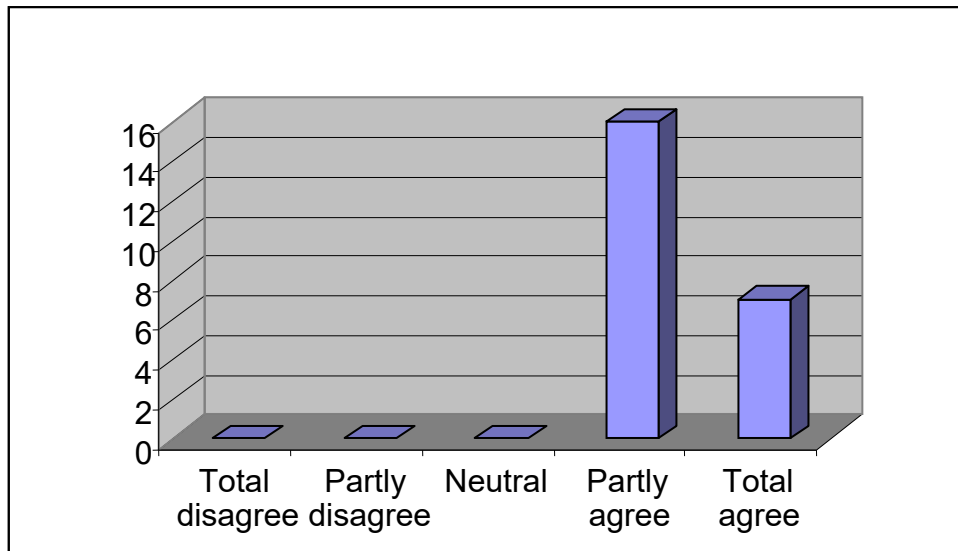


Fig.8. I learned new methods and training techniques

9. We have access to valuable information that we could not get in our country (figure 9)

I had access to new libraries containing works of art, databases ABI, Anbar, ProQuest, software library. I want to mention here, as an everlasting gratitude, the contribution of Viorica Frunza, which brought the U.S. a rich library in management and in particular a large number of production and operations management dealt with software operational management, accounting, for me and for my students, a real godsend. Dear Viorica, thanks!

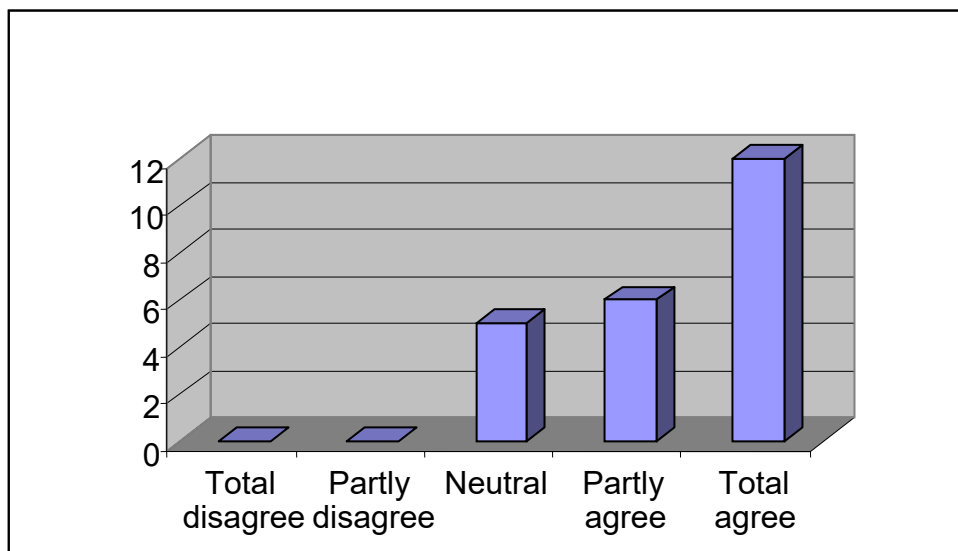


Fig. 9. We have access to valuable information that we could not get in our country

10. We set up some partnerships and lasting friends.

Although my colleagues response (Figure 10) is to approval, but not at its best, I say that it is one of the most beneficial results of our mobility, whether speaking of internal or international relations. The most important achievement of these mobility is the

Economic Engineering Consortium in Romania, for whose existence must thank to professor Monica Izverceanu and professor Ioan Abrudan. The second great achievement is the collaboration between the four universities: Iasi, Cluj, Timisoara, Sibiu. Here I want to mention especially professor Costache Rusu and professor Moise Tuturea both of them people of a great value, professionally and as persons. Can not pass without naming prof. Ioan Bojan, prof. Liviu Marian, prof. Codruța Bolos, prof. Corneliu Radu, prof. Valentin Zichil, associate-professor Alan Paun, associate-professor Dan Miricescu, associate-professor Ilie Tăucean.

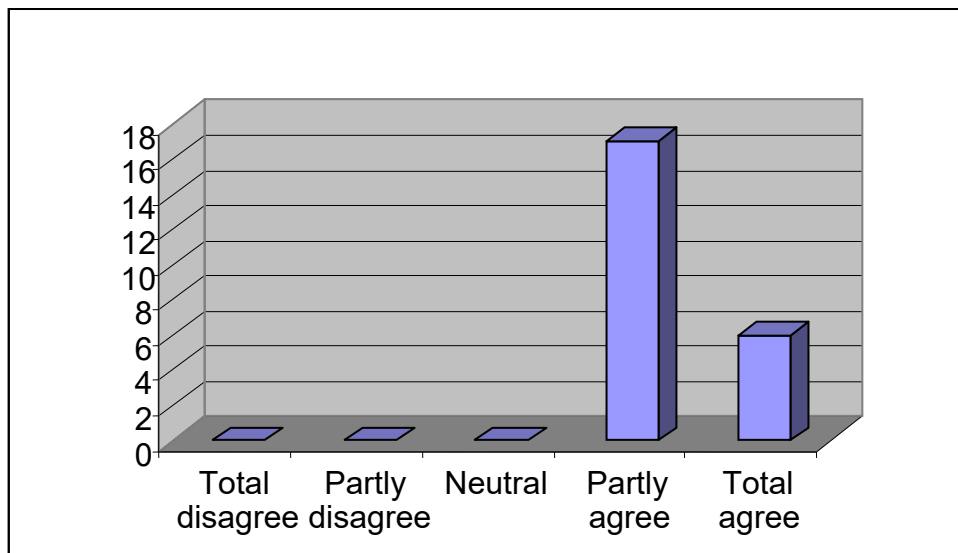


Fig. 10. We set up some partnerships and lasting friends

Partnerships were obviously concluded with specialists and institutions in countries in which we conducted mobility. Mention a few: The Technical University of Crete, Greece, The University of Derby, UK, with ISTIA Angers-France and not least with Citta del Ragazo Ferrara - Italy.

11. We completed the implementation of a mobility project (figure 11).

Although colleges have not responded with a defiantly 'yes', I say that all mobilities were completed by the implementation or continuation of a project. Thus, mobility in France ended with the establishment of the College of organizing production. Mobilities of Ferrara ended with the creation of practice enterprise network, which was joined by "Vasile Alecsandri " University at Bacau. Mobility Crete ended with the establishment of Regional Centre for Public Administration. Leonardo da Vinci mobility was completed by forming a number of nine trainers and simulated business, by writing a book that is still used by students.

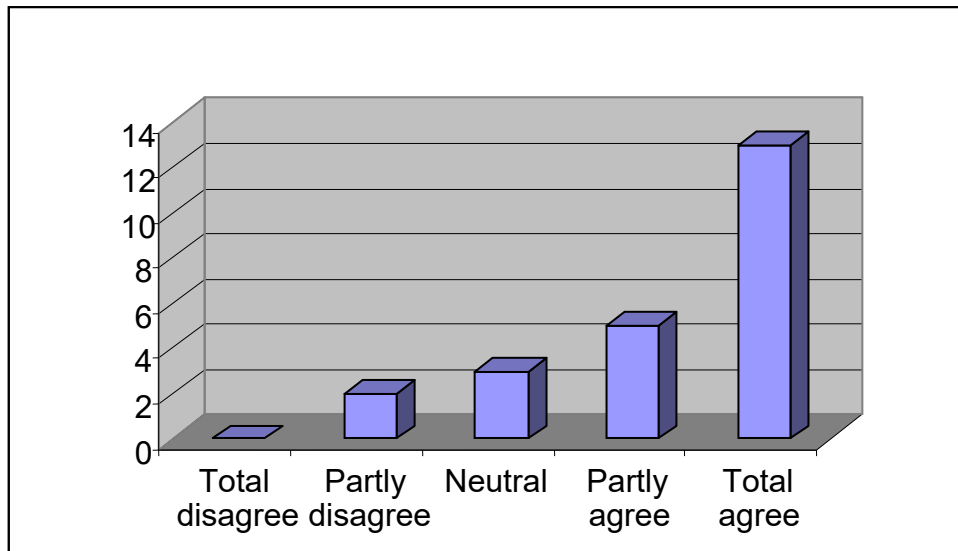


Fig.11. We completed the implementation of a mobility project

12. I met Romanian value, making the country honor and create good image in the West (figure 12).

We've been happy when I met Cristina Crisan - co-originator SIMULIMPRESA Center, Ferrara. Do honor to our country and the Romanian people. Mihaela Barreau (former Bulacovschi) is a renowned professor in Angers - France and as such do much for us. Surely everyone is aware that performs Romanian abroad and creates a good image for country and people.

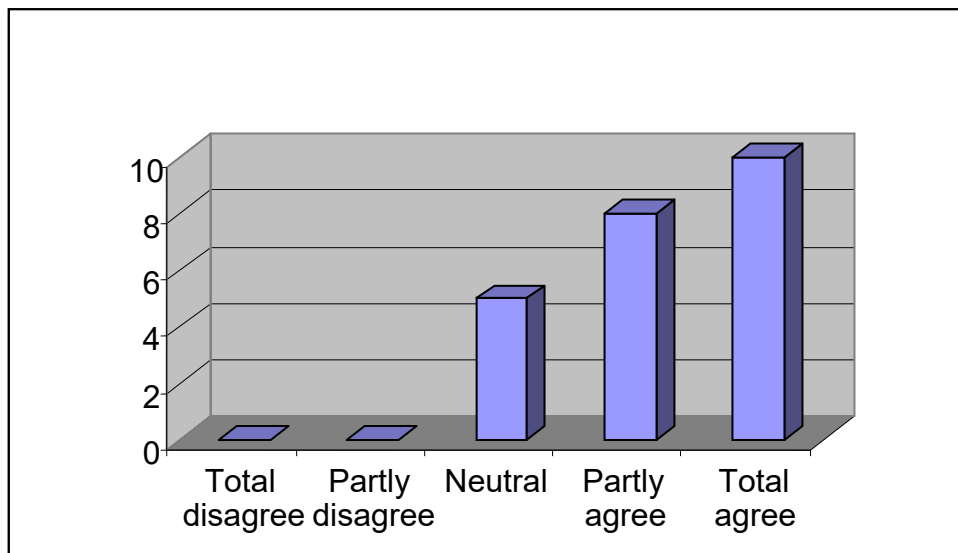


Fig. 12. I met Romanian value, making the country honor and create good image in the West

Unfortunately there and reverse, even if answers were not very relevant colleagues (Table 1). We all know that.

Statistics other item is presented in Table 1.

I asked colleagues views on the following aspects. I remember the majority answer, by way of information, no claim of Statistics.

13. Where you think you have learned the most in the professional field? In Italy and France (figure 13).

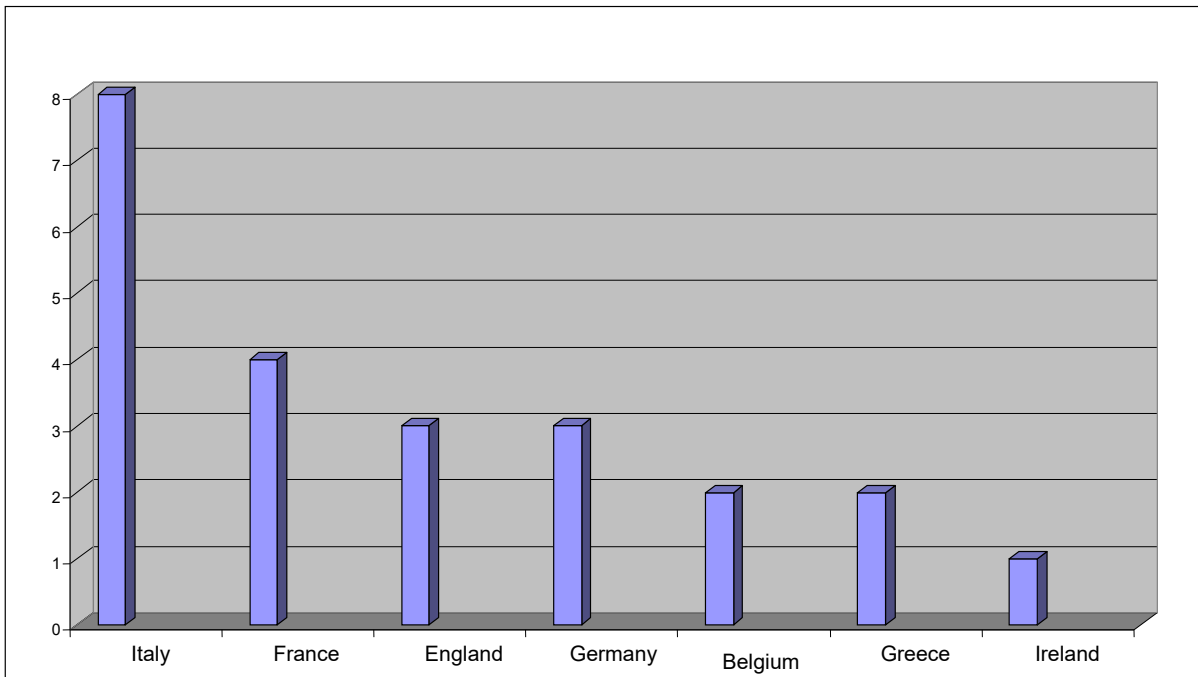


Fig.13. Where have you learned most

14. Where did you feel the best in this mobilities? Answer majority: In Italy. Subscribe (figure 14).

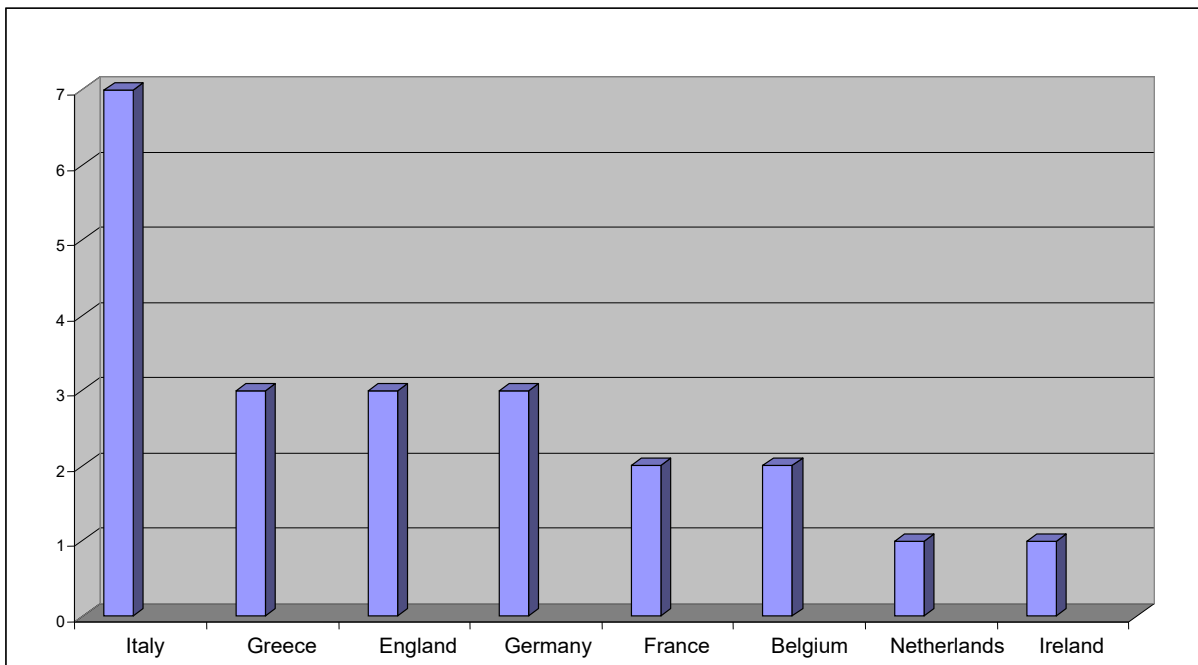


Fig.14. Where you felt best

15. What country you think is or was the closest our country as a system of government? Greece.

16. What country you think is or was the most distant of our country as a system of government? England.

17. What country you think is or was the closest our country as a system of education? Greek, and French.

18. What you think is or was the country most remote from the system of education in our country? England.

Discussion and conclusions

This paper should be viewed from two different angles:

1. as a socio-human scientific research, is used as statistical tools;
2. as an attempt by the author in emotional memory introspection, by which to find evidence of causality between tools - mobility and result - increasing the knowledge and training in management performance.

The two parties make creating a full enough image on the phenomenon addressed.

I think I managed the research undertaken to highlight the importance that a movement had taken engineering and management professionals in Western countries with advanced education system and the favorable outcome of these movements, both in the training plan and overall plan socio-cultural development.

I appreciate the most important outcomes of these mobilities are:

- Enrich the knowledge in management through direct access to information, means and methods of knowledge transmission in developed countries visited;
- Understanding social systems, economic and education systems in the western world in their complexity;
- Trying to translate into concrete conditions of our country, some of the items found and learned in those countries with a greater or lesser success;
- I hope that what I sent in such movements in western media, we modified a rather unfavorable epsilon perception about the country and our people, thus helping to close the much desired media.

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Managerial Implications of the Systemic Approach – Tool for Quality Improvement in Higher Education Institutions

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Abstract

The systemic approach is based on the general theory of Bertalanffy according to which "... in order to understanding and organizing as a whole, it must be known both parties and relations between them." Vision of reality as a collection of systems has enriched management and required consideration of phenomena and processes in their interdependence.

Starting from the premise that the entire universe is composed of simple or complex systems under and / or over ordered, I found purposeful studying managerial implications of the systemic approach as an instrument of quality improving in higher education institutions.

Acceptance by a university of quality philosophy actually means placement on position of trust, that there is always an optimal variant of decision making, a better way of using resources and a more productive way to work.

Key words: *systemic approach, quality management, higher education*

Introduction

Systemic approach is a way of thinking and analysis which is based first on the relations in time and space between elements, and secondly, on analyze of those elements.

Theories and management models that have assimilated systemic approach aspires to a complex and multidimensional knowledge of the organizational reality in order to avoid mutilation of management decisions.

Practical implications of this way of looking at management are:

- Managers should not exaggerate in cutting the organization in service, functions and different hierarchical levels, but to deal as a complex and dynamic system, with many interconnections and synergies;
- Management cannot ignore the interactions between organization and environment;
- The diversity of attitudes, perspectives and values must be regarded as a resource and not a challenge for the system;
- The organization must be accustomed to act under conditions of uncertainty and change and adaptation must occur naturally.

The requirements of the systemic approach are formulate base on the following questions:

1. What is the organization and which is the man's place in it?
2. What are the sources and ways to ensure organizational effectiveness?
3. What is the relationship between the organization and its environment?

Systemic approach - principle of quality management

Systemic approach in management is one of the eight principles of quality management.

Identifying, understanding and managing processes interrelated as a system, contributes to increasing the efficiency and effectiveness of the organization in achieving its objectives. (ISO 9004:2009 Managing for the sustained success of an organization - A quality management approach).

The idea of quality is more frequently linked to various "products" of leadership: strategies and policies developed for different areas, including education, decisions on solving various problems, organization activities, guidance and control. Ultimately, quality leadership is directly dependent on the ability of policy makers to comprehend and master the complexity of political, economic and contemporary social development. Usually, leadership acts on a large number of economic, political, social factors which correlate in different ways. While her face with conscious activity of individuals, groups and the social classes which in part or in a place, creates uncertainty, state of vague, unpredictable situations. Social development put actually the decision makers in front of "complex of complexity" which can hardly be mastered with traditional means of intuition and everyday experience. In relation to these demands, managers need scientific knowledge for appropriate tools for investigation and resolution, and appropriate means for deciphering and dominate the social complexity.

Systemic approach saw extensive development in recent years in management. Proliferation of terms "operational research", "system analysis", "systemic engineering", "modelling" or "simulation" expresses the growing role of system study in scientific substantiation of leadership acts.

The system concept is a kind of shortcut for a set of sentences that refer to many objects in interconnection in any way. The main advantage offered by systems study is the total coverage of a multitude of events, transformations, individual objects interacting in space and time.

The systemic approach provides a framework of explanation for those items which refuses the quantitative describe and require a qualitative analysis.

On the plan of applied thinking, systemic approach is a powerful tool of engineering capable to redesign social structures in accordance with certain objectives and value systems.

In systemic view most numerous complex issues that today require appropriate management solutions such as: urban development, social welfare organization, developing the educational system can and should become a social engineering problem.

Systemic approach to higher education

A systemic approach to higher education sees academic institution, educational and research products and the processes related to their achievement as interconnected subsystems, each with specific inputs and outputs and achieving its function to meet the needs and requirements of knowledge of individual and socio-economic environment.

Even if these needs are not created intentionally, can themselves be treated as a subsystem with inputs, outputs and specific behaviour with respect to time. In a systemic vision, the training of students is inserted in the dynamic of the society, in the development of the university and staff.

The objectives that are systemic defined allow such organization, that the main tasks to be performed more effectively.

For example, setting priorities is a difficult problem in the absence of a systemic vision, reducing to a confrontation between the influences of various pressure groups. Wage increasing over a certain point means lower investment, which in turn can lead to dysfunction by increasing costs, lack of space, books, computers, supplies, etc. Investing in a sports facility, for example, is justified only after the social services offered to students were given a high degree of satisfaction.

The roles of the key actors in the organization can be defined based on their efficiency, and less on personal considerations of prestige and status. Defining processes in systemic conjunction may suggest new ways for improvement that were not obvious before.

Benefits consist in a higher integration, in the ability to identify critical processes and to mobilize the necessary resources.

An organization led by a systemic vision is more predictable and has a better image in front of partners, whose role will be recognized at its true value.

The identification, understanding and management of the interrelated processes system of the University for achieving targets, is contributing to the effectiveness and efficiency of it.

Applying this principle implies:

- Defining the processes system by identifying and developing processes with impact on achieving the defined objectives;
- Structuring the processes system to achieve objectives most effectively;
- Continuous improvement of processes system, taking into account the results of measurements and assessments on this system;
- Determination of critical resources for activities.

A particular importance should be given to systemic approach of "process network" of university, by integrating the processes that are involved in the relationship with customer and other stakeholders, with corresponding activities within the university, from defining requirements for management, identifying and providing necessary resources, ongoing processes to evaluate and analyze results.

At each stage of the services is taken into account certain requirements, and their degree of satisfaction is reflected in the next phases.

Therefore, the participants in the process should be aware of interdependencies, to know the effects of poor work on the "finished product" namely the competences of graduates.

Teachers must be primarily responsible, which is ensured by a continuous training program. Also they must be willing to highlight the full capacity and have team spirit, and work together to achieve university goals.

The analysis and evaluation of results must be performed by the University management, to identify opportunities to improve quality management system so that customer requirements and other stakeholders to be better satisfied. By the management involvement in implementing the proposed improvements the cycle is resuming, ensuring thus the premises for continuously improving of the quality of university management system.

Systemic approach to quality management in "Petru Maior" University of Tg. Mureş

The quality of a university is the extent to which her products and activities meet the expectations and requirements of customers and internal or external partners.

To obtain performance is required a systemic approach.

The systemic approach is to identify, understand and control the system of interrelated processes to achieve the aimed objectives, and contributes to the effectiveness and efficiency.

Quality management includes all system elements and university processes where relevant factors for quality are highlight by:

- in-puts, necessary resources for obtaining the desired results;
- transformation processes of the inputs in outputs, which must be efficient and effective for the realization of the imposed quality requirements;
- out-puts are products or services of the institution;

These measures relate to staff training through statistical methods, techniques and tools of quality management. The employee must be responsible, be accomplished through training programs, be prepared to highlight the entire capacity of team spirit to achieve the objectives of the university.

Quality management system (SMC) is a management system which is guiding and controlling an organization regarding quality. (SR EN ISO 9000:2001).

"Petru Maior" University has established, documented, implemented and maintained a quality management system whose effectiveness is continuously improved in accordance with the requirements of SR EN ISO 9001:2001.

SMC of the "Petru Maior" University describes the relevant processes for university. The strength lies in improving processes, because in this way we are able to improve university performance.

SMC implementation is part of the strategic decisions of the "Petru Maior" University. His design took into account the specific circumstances of the institution of appropriate services and processes for those services.

To implement a quality management system within the "Petru Maior" University were taken the following stages:

- Engagement of the university management for implementing the quality management system.
- Definition of quality policy and quality objectives;
- Establish responsibilities and powers of decision on the implementation of quality management system;
- Appointment of the management representative for quality management system;
- Development and control the quality management system documentation;
- Resources management of university for implementation and continuous improvement of quality management system;
- Results assessment, analysis and improvement.

The orientations of SMC in „Petru Maior” University are:

- Orientation to satisfy the needs and expectations of students and other stakeholders;
- Proactive attitude of the university management towards the quality of all processes;
- Quality approach in strategic terms: mission, policy, objectives, strategies;
- Maintaining under control and continuous improvement of all university processes;
- Involvement and accountability of the staff;
- Identifying relevant quality indicators and introduction of internal mechanisms for quality assessment;
- System documentation to provide objective evidence to establish trust of our customers.

The advantages of quality system implementation:

- continuous improvement of quality;
- extended application of modern teaching methods;
- orientation towards future requirements, anticipating the changes;
- cooperation in achieving proposed goals.

With the responsibility for coordinating all quality management activities is entrusted quality assurance director. He is intended to assist the University in developing the quality policy, the basic objectives in this area. Provides also technical support for activities related to quality at all operational entities (faculties / departments).

Quality management system's documents are:

- policy and objectives of quality;
- quality manual;
- system procedures;

- Control of documents;
- Control of records;
- Internal Audit;
- Treatment of non-compliance;
- Corrective actions;
- Preventive actions.
- process procedures.
 - Management analysis;
 - Human resources management;
 - Competition for filling teaching posts;
 - Improvement of staff involved in long-distances programs;
 - Material resources management;
 - Organization and management of library;
 - Determination and analysis of customer requirements;
 - Communication management;
 - Handling of complaints / allegations;
 - Developing of curriculum;
 - Organizing training on credit transfer system;
 - Organizing and conducting admission exams;
 - Organizing and conducting licence exams;
 - Supply;
 - Conduct educational activities;
 - Preparation and conduct of students practice;
 - Develop state functions of the department;
 - Management of scientific research;
 - Benchmarking.
- necessary documents for the University to ensure the effective planning, execution and control processes.

NOTE. We have here in view also de following documents:

 - which define the contractual requirements of our customers and other stakeholders;
 - laws or other binding regulations that apply and are specific to our field;
 - any internal or external documents containing data and information from our stakeholders interested in our services that are needed to develop our organization.
- Records of quality;

NOTE. We place special emphasis on the documents on some matters affecting the efficiency and effectiveness of their control, such as:

 - fast and easy use of the documents by filing, indexing and available storage;
 - providing the ways and informational facilities for an appropriate control of information.

Conclusions

Analytical thinking as preferential approach in traditional management quickly exhausted its cognitive and regulatory resources since, by cutting the complex structures in components, to analyze them outside the whole, the images get distorted with a relatively low practical value. (Buzărnescu, 2003, p. 248).

"Divide et impera" - divide and conquer - quickly collides with a problem still unsolvable: how far it can move with analytical fragmentation without the mutilation of the whole picture? In the analytical thinking the forest is not often seen because of the trees!

Systemic approach has refocusing the attention from parts to whole.

In other words, by these functions of systemic approach streamlining management structures assumes a high degree of objectivity and contributes to strengthening the effectiveness and management efficiency, thus improving the quality of all management processes.

Education, understood as institutional body can not be considered as having only an internal structure as a result of interactions between its components, but it is subject to social pressures that operate independently and in interaction, in pursuit of educational objectives.

The educational process management undertake a scheme for analyzing the relationship between the resources invested at input - quality of the work - quality of products and graduate at output.

Undoubtedly, a systemic approach contributes to improving the quality of all processes conducted in an institution of higher education, because:

- provides for the management an overall view;
- has a higher explanatory power;
- individual and institutional behaviour is explicable not linear - cause and effect - but holistically;
- to formulate policy and strategy: creates comprehensive and challenging plans that establish functional links regarding the input of process;
- to establish targets: objectives and targets of individual processes are aligned with key objectives of the institution;
- for operational management: an overview of the effectiveness of the processes that lead to understanding the causes of problems and determining actions to improve in time;
- human resource management: provide a better understanding of the role and responsibilities for achieving common objectives, reducing cross-function barriers and improving the role of work teams.

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Some Considerations on Change Management in Production Companies

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Abstract

Purpose – *The present paper would like to draw attention on some characteristics regarding the change processes in the productive area and on an "outside" concept that is applied in the human resources management in Romania, the emotional intelligence. We think that these two issues can be correlated in a successful manner.*

Methodology/approach – *The authors analyze two concepts: change management and emotional intelligence by using practical reasoning and common sense arguments.*

Findings – *Through this approach, some starting points have been draw, namely that models of emotional intelligence could be used in identifying and assessing negative emotions in change processes.*

Research limitations/implications – *The authors do not claim to develop an overview or to provide theoretical concepts, but considerations from the practitioners' point of view on what and how it should be done.*

Practical implications – *The findings emerged from this approach might lead to a construct meant to identify and lessen negative emotions in an organization.*

Originality/value – *As negative emotions can block various processes within a company, the economic value of the findings is relevant.*

Key words: *change management, change processes, emotional intelligence.*

Introduction

“The change phenomenon, in own rhythms for each domain in part, is general and permanent. Hence it is not permanently noticeable, but only at certain times, under the effect of the relative acceleration. A perceptible interval of change is called a transitional era” (Cazimir, 2006). Reading these lines and thinking about Romania as being in a never ending state of transition, questions start to arise: What and how that acceleration could be to take us on “a safe and peaceful shore”? Why can't we speed up this journey? What's going wrong? What went wrong in the past? We think that our own choices made us lost, or as Dăianu (2009) says “In general, when judging the transition, we may find that, frequently, we did not know to defend our interests.”

Conceptions like "everything what the West does is good", or "what went well for them, it will work for us, too", or the rush to Europeanize ourselves, has set us forth on the wrong path. When importing models and ideas it is imperative to filter to the most insignificant detail as what it seems too good to be true, it really is neither true, nor good. Not doing so might result in similar situations after the lohn has left some economic fields: when they came in, they brought us everything; when they left, they took everything, leaving us exhausted and without local and genuine knowledge or resources to “hit the road again” on our own. The lohn brought the methods and culture along to sustain itself. When no profit was possible anymore, they left. The methods and culture became useless. This is the way the Economics leads the History and no blame can be attributed. The same happens today, too, but what comes from abroad is not as concrete as the lohn was, it's more insidious: the models we gladly embrace have a good “inbuilt” portion of Westerner doctrines which ultimately will annihilate and replace our way of being, our identity. Therefore, we should start to think for ourselves, to find solutions that fit to our mentality, to do it in “our way”, to find that acceleration which would put us on the right direction. For sure, then the sun will rise for us again.

Change and Change Management

Change in production companies

There are three major types of production system behaviors: anticipatory, when the system adapts to the changes of the environment before those changes show their effects; active, when the system in the same time adapts to the external factors and influences the environment, and passive, when the system adapts slowly in time to the environmental changes (Tantau, 2002). Change management has to deal with all there of them and to aim for the naturalization of the first one within an organization.

The change can be: technological, structural/organizational and behavioral. Technological change includes any application of new ways of transforming resources into products and services and is the most common type of change in the production organizations, usually followed by various forms of structural changes. Technological change is meant to raise the performance level of the organization (both machines and people) and is accompanied by new knowledge acquiring and training courses. Structural change is meant to increase work efficiency by redesigning the organizational structure, job description and authority relations. Behavioral changes are aimed, generally, to reduce employees' resistance to change by preparing them for it. (Tantau, 2002).

As our main interest is production, we strongly believe that for Romanian companies, "anticipated" technological changes are "a must". A restructuring aimed to increase functionality and enrich the organizational culture is recommended to be carried out regularly, but not excessively as we think this kind of change is the most stressful for the organization's members. In this process, the organizations should redesign themselves for "extreme situations" from the very beginning of the change process as they have to survive in a tough environment. For sound behavioral changes, the power of the leader's personal example remains an extremely effective "weapon" even in this century. The idea that the organization is an accurate "mirror image" of the leader is not exaggerated.

Non-intellectual intelligences in change management

All changes, no matter their nature, have to face one common obstacle: people and their negative emotions (e.g. fear, anger, uncertainty, stress, frustration, panic). A lot of us already know that social intelligence is one of the most valuable assets of the human nature and there is no doubt about how much is needed in one's life. An essential side of the "right man in the right place" is his professional "quantum" given mainly by his intellectual and practical abilities: in a productive company, the workers are mainly specialized in handling specific machines. Therefore, we think that selecting and hiring according to their practical intelligence, which can give an estimation of their practical "quantum", is extremely important in the production field (Curtean and Chira, 2010). This way, when changing technology, the acquiring and implementation of new knowledge is "half done". The matter of IQ: to select and hire, and then to develop and keep highly intelligent people within a company is in our opinion a common sense based issue. To complete this "profile", the moral intelligence has to be added. For us, being morally intelligent mainly means to be able to differentiate the bad from the good, and translate this into concrete "outside orientated" actions, in that what

can harm or can help an individual; action is required as a proof of the inner process. We admit that on this subject, the debate might be delicate. We only expressed what a morally intelligent individual should minimally possess using common sense reasoning.

As a conclusion, the “right employee’s” profile has to include the following intelligences, beside the intellectual one: social, moral, practical and emotional.

Emotional Intelligence

Intelligence. Definition

„Intelligence is a very general mental capability involving ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly, and learn from experience” (Colom, 2004). Definition of intelligences evolves continuously and is consistent with the social values of the time. In the last decades, psychologists have extended the concept and included in it various aspects of “thought and reasoning”. It has become more important how people use their intelligence rather than “how much” intelligence a person has (Gale Encyclopedia, 2001).

Emotional Intelligence. Definition

The term is well known, but its exact meaning is not as well known. The term is misused for most of the times (Salovey, 2008) and it seems to us that it has created a general euphoria among intellectuals in seek of new “thought and reasoning” directions. As Dr. Salovey (2008) says, “almost everything what’s not intellectual, it has become soft.” Lots of specialists have appeared and expensive tests are available on the market. As almost any other western concept, this one has been accepted in our country, unreservedly, too. Before using a concept for personal or organizational purpose, we recommend to analyze as many as possible theories and models. The one that fits better should be consequently used.

In our approach, we studied the three “classical” models of emotional intelligence: Bar-On, Goleman and Mayer-Salovey and compared them with our objective: managing change in production. We started with the following definitions: “Emotional intelligence refers to a set of abilities that involve the way in which people perceive, express, understand, and manage their own emotions as well as the emotions of others” (Cherniss, 2004) and emotional intelligence is “the ability to perceive and constructively act on both one’s own emotions and the feelings of others” (Ford-Martin, 2001) as we think they are clear and concise.

Models and Tests

Reuven Bar-On. Emotional-Social Intelligence and the State of Wellness.

During his doctoral studies, Reuven Bar-On has coined the term emotional quotient – EQ, which scores the “emotional and social functioning” of an individual, meaning that “The higher the scores, the more positive the prediction for effective functioning in meeting daily demands and challenges” (Bar-On, 2005). Later, he developed this

concept and presented its final form, in 1996, in „The Era of the EQ: Defining and Assessing Emotional Intelligence”, at the 104th Annual Conference of the American Psychological Association (EI Consortium, 2010a). In 1997, he designed and published „The Bar-On Emotional Quotient Inventory - the EQ-i”, meant to assess the construct of emotional-social intelligence. The EQ-i is a self-report measuring the emotionally and socially intelligent behavior and contains 133 items; it takes about 40 minutes to complete and is suitable for individuals 17 years of age and older. In 2000, together with J.D.A. Parker, he published „The Bar-On Emotional Quotient Inventory: Youth Version – EQ-i: YV”, a 60-item version of the EQ-i, which is applicable from 8 to 18 years of age and takes approximately 15 minutes to complete (Bar-On, 2005).

The emotional-social intelligence (ESI) construct relies on the five EQ-i scales and the related competencies: Intrapersonal scale, assessing the self-awareness and self-expression competencies, includes next subscales: self-regard, emotional self-awareness, assertiveness, independence and self-actualization. Interpersonal scale, assessing social awareness and interpersonal relationship competencies, includes empathy, social responsibility and interpersonal relationship. Stress Management scale, assessing emotional management and regulation competencies, includes stress tolerance and impulse control. Adaptability scale, assessing change management competencies, includes reality-testing, flexibility and problem-solving. General Mood scale, assessing self-motivation competencies, includes optimism and happiness (Bar-On, 2005).

The model emphasizes that emotional and social competencies allow us to effectively manage changes we go through, whether they are personal or social in nature, they determine our behavior and contribute to our overall state of wellness. At the basis of these competencies stands the intrapersonal ability that allows us to be self aware, “to understand our strengths and weaknesses” and to express our feelings and thoughts in a non-destructive manner (Bar-On, 2005).

Conclusions:

We do not agree upon using self-report assessments. From our own professional experience we learned that there are people who knows what behavior fits best in any circumstances; in other words, they might not be totally honest during such a procedure. We would not consider using this model as it cannot serve to identify and assess negative emotions connected to change process, although the Adaptability and Stress Management scales provided us good starting points in studying the “faces” of stress behaviors.

Regarding the “Mood scale” we would like to make the next observation: optimism can neither be taught, nor developed; there are only two reasonable “states” of it: or you have it, or you don’t. The state of happiness is directly connected to the state of self contentment strongly influenced by one’s individual value system. An organization should not aspirate to measure and develop or improve this human feature. It is beyond its social responsibilities.

Daniel Goleman. Emotional Competencies and Leadership

Daniel Goleman is the personality most strongly linked to the concept of emotional intelligence. He studied journalism and psychology and for many years he was a reporter for The New York Times, publishing under the heading of behavioral sciences. In 1995 he published the book "Emotional Intelligence. Why It Can Matter More Than IQ" and in 1998, "Working with Emotional Intelligence" in which he presented his first model of emotional intelligence. The model contained personal skills, self-awareness, self-regulation and motivation, which are skills that determine how we stand and respond to ourselves, and social skills, empathy and sociability, skills that determine the quality of our relations with others (Goleman, 2004).

"Emotional intelligence determines our potential for learning the practical skills that are based on its five elements: self-awareness, motivation, self-regulation, empathy, and adeptness in relationships". Emotional competence, as a "learned capability", "shows how much of that potential we have translated into on-the-job capabilities". It has to be noted that having an exceptional emotional intelligence does not guarantee the acquisition of those emotional competencies that matter in our profession without education and many years of work (Goleman, 2004).

The model presented above is revised in 2002 and presented in the book "Primal Leadership". In the new model, competencies are refined, the personal ones are self-awareness and self management, and the social ones are social awareness and relationship management. The authors have removed the motivation and replaced empathy with social awareness and sociability with relationship management (Goleman, Boyatzis and McKee, 2007).

In 2002, based on the two models mentioned above, on the Hay/McBer's Generic Competency Dictionary and Dr. Richard Boyatzis's Self-Assessment Questionnaire, "The Emotionally Competence Inventory - 2.0", was published by Hay Group and McClelland Center for Research and Innovation, under the recommendation as a mean of individual and organizational development tool. The test is designed as a self and others report meant to assess emotional and social competencies (EI Consortium, 2010b).

Conclusions:

Ability, capability, competency and skill are used as interchangeable terms. If one does not define correctly the construct, it will have neither the expected results, nor the possibility to measure them in an accurate way. The lines of Jack Mayer and Joseph Ciarrochi are of great help in clarifying some of the terms (Mayer and Ciarrochi, 2001).

We do not agree upon using self-reports in assessments but we agree with Dr. Goleman in his interview (Goleman, 2008) when he states that social intelligence in leadership is more important than the emotional one as we've already reached this conclusion from our own professional experience as production engineers.

Although we would not consider this model during a technological change, we think it could be used in a structural one.

John D. Mayer and Peter Salovey. Emotional Intelligence as Standard Intelligence

In 1990, Mayer and Salovey have define the concept of emotional intelligence “as the subset of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and use this information to guide one’s thinking and actions” (Salovey and Mayer, 1990).

In 1997, the authors published a revised definition and a skill structured model, in which they underlie the connection between intelligence and emotion. According to them, emotional intelligence is “the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth”. In the model, they have “diagrammed” the skills in four branches, “arranged from more basic psychological processes to higher, more psychologically integrated processes.” The branch named “Perception, Appraisal, and Expression of Emotion”, the lowest one, “concerns the accuracy with which individuals can identify emotions and emotional content”. The second branch, “Emotional Facilitation of Thinking” describes how emotions act and assist the “intellectual processing”. In the third branch, “Understanding and Analyzing Emotions; Employing Emotional Knowledge” possible evolutions of this ability during one’s life are described. “Reflective Regulation of Emotions to Promote Emotional and Intellectual Growth” is the highest branch as it “concerns the conscious regulation of emotions”, meaning that attending to feelings and understanding them as they are, can lead to emotional knowledge and experience (Mayer and Salovey, 1997). Further more, the authors believe that emotional intelligence should be regarded as a standard intelligence, not as a mix of socio-emotional skills and personality traits; as it can be measured and “operationalized as a set of abilities”, it is related to other intelligences, and it “develops with age and experience” (Mayer, Caruso and Salovey, 1999; Mayer et al., 2001).

In 1998, the authors developed “The Multifactor Emotional Intelligence Scale” - The MEIS, as an assessing tool of their four-branch model of emotional intelligence. Later in 2002, with David R. Caruso, they have perfected “The Mayer-Salovey-Caruso Emotional Intelligence Test” – The MSCEIT, which consists of 141 items and takes 30-45 minutes to complete (EI Consortium, 2010c). Currently, the above-mentioned team works to develop alternatives to assess emotional intelligence in young people aged between 12 and 18 years: “The Mayer-Salovey-Caruso Emotional Intelligence Test-Youth Version - The MSCEIT-YV-R”. As John D. Mayer (2010) says on his site, “these tests are designed to measure emotional intelligence by directly assessing a person's capacity to identify emotions and they evaluate participants' responses according to a criterion of correctness rather than relying on self judgment”.

Conclusions:

We are aware that in the literature there are other models of emotional intelligence, too. Some of them are regarding individuals, some of them groups, but most of them rely on competencies or personality traits. We do not deny their scientific relevance, but we simply could not use them in our approach to identify and assess negative emotions in change. This model and its test would be a reasonable apparatus to start

with in identifying and assessing negative emotions in change processes. We would use this model, too, as we consider emotional intelligence as a standard intelligence.

Conclusions

The economic efficiency of the human resources programs based on emotional intelligence is well established in the business world. The beginnings have been laid out already by several scientists such as Lyle M. Spencer (Spencer, 2001) or John F. Tomer (Tomer, 2003) and others. Still, research in this field has to be done. We think the efforts will be rewarded.

Dark side of EI: people high in emotional intelligence but with low or no moral intelligence will tend to manipulate people and situations whenever possible (Hein, 2003). This kind of individuals is very difficult to identify and then to eliminate from organizations as they hold enough mastery to elude the truth and simulate the best requested behaviors. This is one of the main reasons we do not advise the use of the self reported methods in personnel assessing.

Here we would like to make an observation regarding moral intelligence: there is a lot of literature about ethics and social corporate responsibility and sustainability. Companies and leaders have to be responsible. Those leaders and managers who put in practice these concepts have to be morally intelligent. In this way, when meaning ethics, they will be able to say "I must be responsible" instead of "I have to be responsible". The first statement is, of course, more "sustainable"¹.

Discussion and conclusions

The practitioner operates with simple, transparent and well targeted constructs. We are practitioners who felt the need to study. In our approach, beside thinking and practical sense, intuition plays a major role, too.

Regarding the concepts or models to be used: the above mentioned approach has to be done within the organization and the team which does this - study, analysis, conclusions, final decision, and implementation project preparation, has to be a team of experts, the best pros the organization might have. This team of experts will hand over its knowledge and implementation project to the change management team, whose leader, member of the first mentioned team, will act as a project manager for the second one. In this way, the connection between the two teams is insured. We think that among the members of this second team, one or two might be foreigners, namely the ones who possess technical knowledge if a technological change is to be implemented. For organizational or behavioral changes we suggest as members of change team insiders only.

Regarding the models and tests which require the intervention of foreign experts and consultants (except those needed in technological changes), we mean intermediary people: we do not agree upon this, though in this world there is enough room for everybody to live. The human resources departments should take over this matter and get involved in various areas of expertise.

As practitioners we are not interested in a profound debate regarding the superiority of one concept upon another. We take the available models the way they are on the scientific arena, we weigh them and then we adapt them to our organizational needs as we are fully aware of their existent limitations. We also study as many models as possible and the accumulated experiences from those who have used them. Meeting at such conferences as this one is an excellent opportunity to share opinions and experience.

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Notes

¹ “When we talk about necessity in the present or the near future, we can use either *must* or *have (got) to*. But there is a difference in meaning. We normally use *must* when the speaker feels the necessity and *have to* when the necessity is outside the speaker.” [Eastwood, 2002].

The Prospects of Foreign Direct Investment in the Region of Central and Eastern Europe

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Abstract

Purpose – This study tries to reveal the main periods of Foreign Direct Investment (FDI) flows, since the political change of Hungary till nowadays.

Methodology/approach – Trying to analyze the trends of FDI flows in the world and in Hungary with using databases, statistics and other research studies.

Findings – There is a declining trend of Hungarian capital import which is influenced by the failure of the nation's capital attracting ability.

Research limitations/implications – The present study provides a starting-point for further research in the trends of FDI flows.

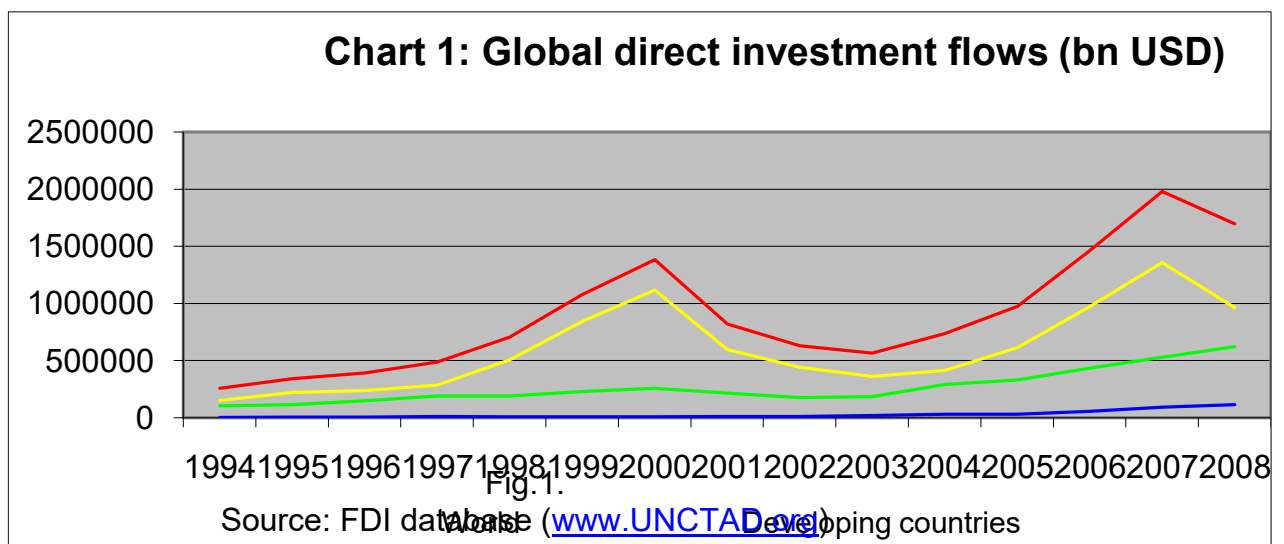
Practical implications – Hungary needed foreign capital to solve the problems of the financial budget in the year of 1990s. Hungary lost its former prominent position in attracting FDI considering the CEE region.

Originality/value – Considering the effect of FDI flow positive, but must draw attention to the necessity of internal resources and the development of domestic enterprises.

Key words: FDI, global economic crisis, CEE

Global Foreign Direct Investment (FDI) trends – an overview

The past decade was extremely eventful considering the FDI flows as it produced hectic movements over this period. The capital flow was increasing at a steady pace in the longer period between 1970 and 1997 (at an average rate of 15 percent annually), from a 13 billions till 500 billions of US dollars. Over the following 3 years time, the FDI rose with an outstanding pace: 40 percent annually. However, the economic downturn at the turn of the millennium affected this promising tendency in FDI-flow. The capital movements started to slow down and reached a minimum level in 2003, which was half the size of the amount of the year 2000. After stabilized global economic conditions and a starting growth in GDP, the annual amount of investment flows rose up till 2000 billions of US dollars in 2007.



There was a decline in global FDI in 2008, the year of the financial and economic crisis, but the slide continued into 2009. This fall is supposed to have a great effect on capital flows, and only a slight recovery is expected in 2010 and maybe a stronger rebound in 2011.

The biggest fall was realised in developed countries, but of course FDI inflows couldn't rise in developing and transition economies either. Though in the year 2008 developing countries weathered the global financial crisis better than developed countries (see Chart 1), as their financial system were less closely interlinked with the hard-hit banking systems of the United States and Europe. However, an indisputable change of the latest years is that the share of the developing countries in total FDI flow surges up to 43 percent in 2008. The importance of emerging markets can be seen as we look at their share in world's gross total output. Their rate of contribution to gross domestic product exceeds 30 percent in 2009 which was only 20 percent in year 2000.

Different movements in Hungary

The trend of capital movements in our country is the opposite of that in the world. Over the past twenty years we can differentiate three main periods in FDI flow of Hungary:

- the period related to privatization (the year of the 1990s)

The anomaly of our country's foreign direct investment flows is that, while the amount of FDI flows tripled between 1997 and 2000 in the world, the value of stock factor dropped to 2,8 from 4,2 billions of USD in Hungary.

- the divergent FDI flow in Hungary (2000-2008)

At the times of the first biggest capital flow crisis (2000-2003), the Hungarian capital import dropped back only a little bit, though FDI flows in the world declined to its third part due to the global recession. The uncertain events¹ of the year 2006 discouraged foreign investors coming to Hungary, while inward flows of global FDI reached its highest level in 2007.

- the events after the financial crisis (2008-2011)

The financial crisis spreading toward the real economy had negative effects on all economic indicators and process. FDI flows have fallen mainly for the following reasons: first, new investments to expand business abroad, either through cross-border Mergers and Acquisitions (M&As) or greenfield projects, was falling. Second, divestments (including repatriated investments, reverse intra-company loans) have exceeded gross FDI flows to several host countries. This phenomenon has produced negative inflows in the balance-of-payments statistics of several developed countries.

The period related to privatization (1990-2000)

The value of global capital flows was increasing dynamically between years 1990 and 2000. Basically, countries of Central and Eastern Europe opened their economies to foreign capital through a political change, with Hungary first. The main motive behind capital movements of the 1990s was **privatization**. Definitely, it was owing to privatization that Hungary could attract much of foreign capital investment among the Visegrad Four countries till the millennium.

The government's aim with privatization was to generate a privately owned competitive sector with reducing state ownership, in order to carrying out the basic economic structural change by their stronger interest. The fundamental economic

idea behind privatization is that privately owned competitive sector can achieve a more effective production and a growing (but with a different extent) prosperity accessible to the entire society.

Many empirical studies reveal that new businesses funded mainly from foreign capital may operate more effectively and successfully many times as compared with privatized state-owned enterprises (SOEs).

Beside the presumable efficiency-extending role, *increase in revenues* was also an aim in the first period of privatization. Many state-owned enterprises ran with showing a deficit, so their operation meant huge current expenses for the budget. In addition to that the stock of public debt was extremely high, so revenues from privatization were necessary.

In Hungary, the dominant privatization technique was the *open competition tender*, during majority shares were sold directly and mainly for cash to new owners being (especially at larger companies) mostly *foreign strategic or financial investors*. The most important privatization action took place at the end of 1993 when they sold 33 (30 percent for foreign strategic, 3 percent for foreign financial investor) percent of Matáv company's share for 87.5 billion HUF. 1995 was also an eminent year, because through the privatization of the energy sector, 481.04 billion HUF went to the budget. According to a study released by the *Ministry of Finance (2009)* Hungary achieved 2953 billions of HUF privatization revenues from the year of the political change till 2007. About half of the amount derived from foreign investors.

Table 1. The privatization and foreign investors

Year	Foreign investment (million USD)	Of which in cash (million USD)	Of which revenues from privatization (million USD)	The share of privatization revenues (%)
1990	900	311	0,8	-
1991	1614	1459	328	22,48
1992	1614	1471	518	35,21
1993	2481	2339	1117	47,76
1994	1320	1147	104	9,06
1995	4638	4453	3268	73,39
1996	1788	1613	618	38,31
1997	2261	2096	1045	49,86

Source: Csáky-Macher 1998, pp. 140.

We can follow the above mentioned events on Chart 2. It shows that after the political change of Hungary the capital flow is closely related to privatization actions, but they get separated in times of the millennium. Only years 2006-2007 produced a greater upswing when the privatization of the big oil concern MOL and Budapest Airport took place.

Beside the acquisition of state-owned enterprises by foreign investors Hungary attracted a significant number of greenfield projects in the region. In the first wave of investment of 1990s, cheap labor force available due to high unemployment attracted much of the investors to Hungary. Wage work and low added value assembly

operation dominated in the manufacturing industry. Decisively, products got exported, so foreign trade transactions started to increase at an accelerated pace.

Organizations with foreign participation handled 51 percent of the export in 1995.

Positive economic effects attributing to FDI in this period

- amelioration of the balance-of-payments (BoP): FDI as a non-debt-generated financing element, financed the deficit of the current account
- export pulls economic growth
- manufacturing (mainly machinery, equipment, transport), as an export-intensive sector was the target industry of FDI, and this way it helped structural reforms and modernization
- amelioration of general economic indicators: inflation, national debt, budget deficit
- owing to the new foreign investors restructuring began to accelerate with important investments and developments, together with an advance in competitiveness

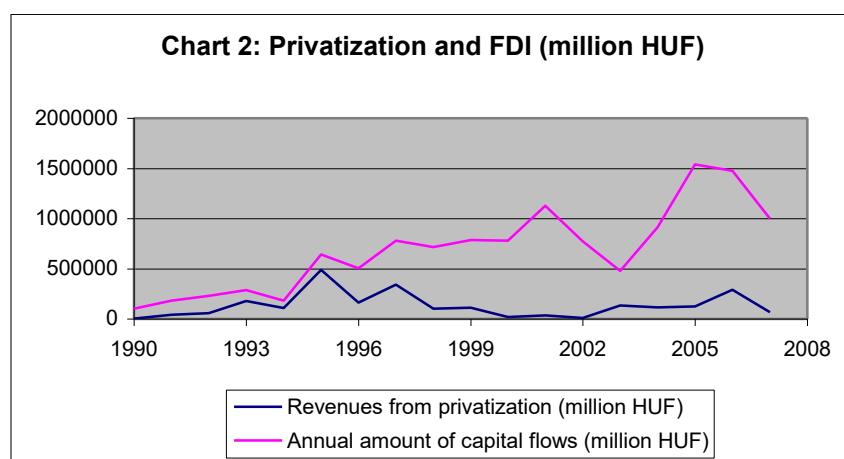


Fig. 2.

Source: Ministry of Finance (2009), National Bank of Hungary

The performance of Hungary in the CEE region

During the early stages of the transition in 1990-93, Hungary absorbed 45 percent of FDI inflows to 25 countries of the former Soviet Union and Central and Eastern Europe. In terms of annual flows in respect to GDP Hungary has remained the top recipient each year over 1990-97.

Hungary's edge over other FDI recipients was even larger when cumulative FDI inflows are assessed against GDP (see Table 2). With annual FDI inflows amounting since 1991 on average to around 5 percent of the GDP, their cumulative value is equal to 33 percent of the GDP, around 2 times more than in Czech Republic.

Table 2: FDI inflows to Czech Republic, Hungary and Slovenia, 1990-97

	1990	1991	1992	1993	1994	1995	1996	1997	Total, 1990- 1997
In million of US dollars									
Czech Republic	207	400	600	564	762	2 568	1 435	1 300	7 836
Hungary	311	1 462	1 479	2 350	1 144	4 519	1 986	1 785	15 036
Slovenia	0	0	111	113	84	170	178	300	956
In terms of share in GDP									
									Total in 1997 GDP
Czech Republic	0.66	1.64	2.14	1.82	2.12	5.46	2.65	2.62	15.78
Hungary	0.98	4.56	4.11	6.28	2.85	10.54	4.57	3.95	33.30
Slovenia	0.00	0.00	0.90	0.90	0.58	0.90	0.95	1.55	4.92

Source: UNCTAD database

In this period Hungary has been more successful than other transition economies in attracting FDI. General characteristics, such as macroeconomic fundamentals and structural reforms are necessary conditions to attract capital flows. However, Czech Republic and Slovenia attracted less FDI although they both scored higher than Hungary in terms of inflation (lower) and debt stock (lower).

FDI flows after the Millennium

The trend of capital flows turned about in Hungary after year 2000. Capital flows declined significantly compared to both at regional level and at the achievements of the previous years.

After the privatization actions dropped in years 2001-2002, the source of FDI flows were *greenfield projects and reinvested earnings*. The earlier advantages of Hungary started to diminish as gross wage costs strongly increased which wasn't followed by fast increase in efficiency improvement. In excess of this a huge amount of money was drawn out of the country from highly labor-intensive sectors (textiles, footwear, electronics-assembly). From 1999 capital import couldn't finance the current account deficit, so the external debt of Hungary started to rise. Above this, global economy turning into recession and a stronger HUF for a longer period were against FDI flows. Practically there weren't any privatization-related FDI inflow from 1998 in Hungary, while in the region, for example in Poland and in the Czech Republic, privatization activities accelerated which meant a suction effect for FDI inflows.

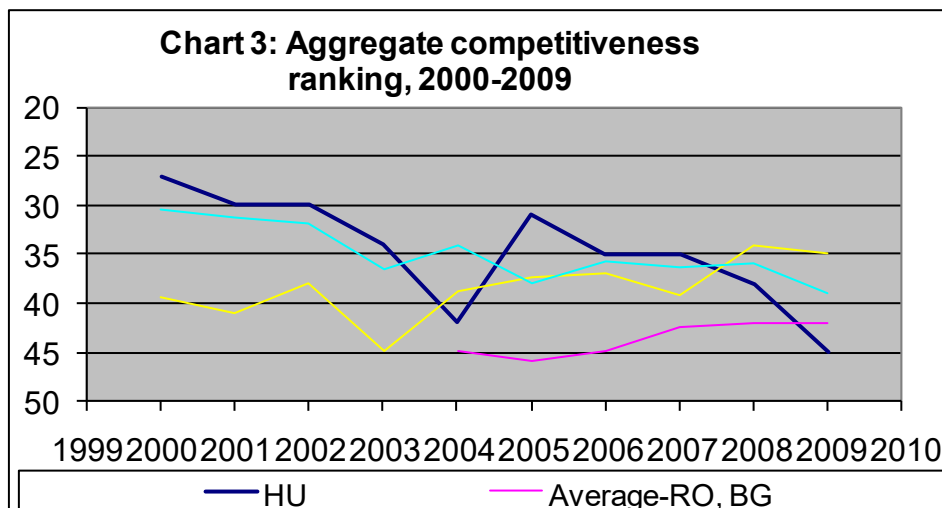


Fig. 3.

Source: own calculation based on data from IMD WCY

The Hungarian economy has grown an average of 4.3 percent between 2000 and 2006, but it generated an unsustainable level of budget deficit by the end of 2006. After the adjustment, economic growth was only 1.3 percent in 2007 which was much lower than expected.

Hungary achieved quite a good position in a ranking published by IMD World Competitiveness Yearbook around the millennium, but in recent years - with some fluctuation - it slid down. By contrast, countries wishing to gain upon Hungary (Bulgaria, Romania) improved by getting closer to Hungary in the ranking, while direct competitors (Czech Republic, Poland, Slovakia) obtained a better average position and sped ahead our country (Chart 3). If we took the Poles out of the evaluation –which country’s rank significantly ruins the aggregation- we could realize that the aggregate indicator of the Czechs and Slovaks would exceed Hungary’s performance.

The effect of the global crisis on FDI inflows

The last year was clearly the worst year in respect of direct investment flows. FDI flows arriving to Central and Eastern Europe² grew fivefold during 5 years before the financial crisis, but last year it dropped by 50 percent compared to the previous year. Slovakia was an exception in the region, because it attracted 55 percent more FDI capital which can be related to essentially one transaction giving 40 percent of the total Slovak capital flows. The least affected by the crisis was the Czech Republic with a 20 percent decline, while Hungary suffered a 40 percent decline.

According to a survey by Ernst and Young³, CEE (the region including, among other countries, the Czech Republic, Hungary, Poland, Slovakia and Romania) was regarded by international executives as the third most attractive foreign investment locale **in 2007** after Western Europe and China and is the second most favorable place for investment in the manufacturing industries. But the situation has changed so far.

According to a recent study⁴ CEE would have probably attracted less capital even without the crisis followed by the recession, because our labor costs measured at German level started to rise sharply before the crisis began. The recession obstructed the FDI flow even more, since investors found CEE countries less attractive because of the rise in credit risk premium and a decline in GNI per capita.

Table 3: Hungary's performance in the region

	Cumulative FDI flows (1998-2008)		FDI flows USD per capita		FDI flows in % of GDP	
	million USD	USD per capita	2007	2008	2007	2008
Croatia	5	4	1	1	1	1
Czech Republic	2	1	2	2	3	2
Estonia	7	2	4	3	4	3
Hungary	3	3	8	6	8	7
Latvia	8	6	3	5	2	4
Lithuania	6	8	7	7	6	6
Poland	1	7	6	8	5	8
Slovakia	4	5	5	4	7	5
Slovenia	9	9	9	9	9	9

Source: calculation based on data from UNCTAD database

Much of the analysis considering FDI activity in the region concerns only the Visegrad Four countries⁵, but let's have a look at our wider neighborhood. Table 3 shows that Hungary doesn't perform quite well in the region, as the Czech Republic and Estonia both leave Hungary behind in the indicator of cumulative FDI inflow per capita. This indicator which is considered to be the most important one became significantly worse mainly in the last two years of the period examined. This negative trend shows that we have lost our prominent place in the region. The Czech Republic, Estonia, Croatia are operating with an outstanding way.

Discussion and conclusions

The features of FDI flows have changed over the years, for example the service sector represents an increasing share in it. Nowadays fifty percent of FDI investments are realized in the service sector (trade, repair of goods, financial intermediation and other business activities) even in Hungary with a 55 percent share in 2007. In the recent years, we notice the *low capital-intensive, but lots of qualified-jobs created investments* coming to Hungary. In this aspect we have to take advantage of huge investor interest on creating service centers in Hungary as performing regional and global tasks⁶. This could be a shift to a qualitative capital inflow direction.

Companies with foreign participation are very important for Hungary as they are responsible for 80 percent of the country's export. They significantly contribute to *budget revenues* despite the preferences they can receive for example in corporate taxation. For example in 2008 they paid 60 percent more in social security contributions and 77 percent more in corporate compared to an average enterprise (APEH, 2009). It is true that we shall gain the confidence of new investors, but we have to rely on the still existing ones because of their *reinvestments and integration*

mechanism. Despite their role painted above, foreign companies' *share in employment* is relatively low. The Hungarian privately owned companies operate with three times more employees than foreign enterprises (HCSO 2009).

The activity of foreign investors highly depends on the economic policy of the reigning government. As the export facility of Hungary declined after the downturn at the Millennium, the government looked for alternative economic stimulus possibilities (Lentner, 2005). However, in the recent economic crisis Hungary didn't have the sufficient budget sources to solve the problems generated from the crisis. Countries who adopted economic stimulus packages as USA and much EU countries survived economic downturn quite well. Hungary recently produced a slight economic growth, but a stronger economic recovery in Central European economies is highly sensitive to the continuing cyclical upswing in core euro area countries. The sensitivity is driven not just by the very *close trade and FDI links* but by the fact that Central Europe's recovery thus far has been largely driven by *external demand*.

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Notes

¹ Anti-government protests, riots, demonstrations, and its financial consequences;

² The value of invested capital was 30 billion in 2003, 155 billion in 2008, but last year 77 billion USD in the CEE region;

³ Ernst & Young's European Attractiveness Survey, June 2007;

⁴ Study by Pricewaterhouse Coopers (March 2010);

⁵ Poland, Hungary, Slovakia, the Czech Republic;

⁶ British Petrol oil and gas company opened a new service centre in Budapest in 2009 with a staff planned to be over a thousand.

Implications of Culture on the Romanian Management

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Abstract

Purpose: *The purpose of this paper is to analyse the implications of culture on the romanian management style*

Methodology/Approach: *The research is conducted starting from the theoretical part, describing the implication of culture on management and developing the empirical perspective, based on a questionnaire addressed to the female romanian consumers of clothing. The research is then summarized by answering to three research questions.*

Findings: *The results show that, even if the cultural aspects are of a great importance in finding a suitable management style, the empirical study reveals that price and brand are more important for the managers to be taken into consideration when creating their offer than religion, a main cultural factor*

Research limitations/implications: *This research is limited by the limited group of subjects, 150, but the perspective opened through it are very promising. The research is part of a wider project, in which the quality management aspects and the way they are influenced by the national culture in a german company active in Romania and Germany are described.*

Practical implications: *The paper reveals the degree in which the management of a company active on the clothing market has to take into consideration cultural factors when addressing to female consumers in Cluj, Romania, aged 30-50 years, with an average monthly income available for shopping of 350-1000 RON, with a university degree.*

Originality/Value: *The originality of this research lies in the approach, in the research conducted and in the perspective on culture adopted in the theoretical part.*

Key words: *culture, management, clothing industry*

Introduction

This paper will analyze the importance of culture for management, at a theoretical level, through defining culture from philosophical and managerial perspective. The romanian culture will be characterized using Samuel Huntington's and Geert Hofstede's research. Afterwards, the result of an empirical study will observe the validity of the findings described before and will offer certain conclusions and suggestions for the managers in Romania, active in the clothing industry.

Theoretical approach

„The culture represents the total spiritual, creative, artistic manifestations of a community as a manifestation of the superior development of the mankind, which is reflected inside one community and on a certain field, in a certain era” . (Duden, Deutsches Universalwörterbuch, 1996)

Conceived in this way, culture would have to consider nowadays certain social developments and state of minds, mentalities and patterns, which have to be taken into consideration by every business person, not only at a personal stage, but mostly when talking and acting in a certain business environment. Culture, along with history, is the creator of the future of a society. Therefore, the economical habits and not only are influenced mostly by culture. Culture always has to do with the question of a dialectic between proximity and distance, a balance between closeness and distance. Various aspects are to be embraced by culture, in the sense that the term has gained importance far beyond the mankind and the history of human events and human civilization. Culture includes values and ideas, the way in which people have represented and developed the environment for themselves. Therefore, when

we speak today about globalization, we examine the development of culture in a multicultural world.

From the anthropological point of view, culture is the identity of a people. The current question is whether one can speak of a preservation of national identity and if only the terms of the dialectical questioning as those of Oskar Negt, defined as proximity and distance, should be taken into account when discussing the impact of culture on society and, therefore, on management.

These rather philosophical considerations gain relevance in the today's business environment, when the issue of national identity and political and economical blocs become certainties as being, in the same time, paradoxes. Researchers such as Samuel Huntington also speak of a globally accepted clash of cultures. "A global clash of civilizations can be avoided only when they accept the powerful of this world and maintain a comprehensive policy, taking into account the differences in values."

The world and international politics is now a multicultural and multipolar post-cold warspace. In the early modern period, the development of the society divided the global policy in two dimensions. On one side were the nation of the West - Britain, France, Spain, Austria, Prussia, Germany, the USA, and the other nations on the other side of the curtain – therefore, a multi-polar international system in the context of western culture. During the Cold War global politics became bipolar and the world was divided mainly into two parts. A group of mostly wealthy and democratic societies, led by the United States was in a consistent ideological, political, economic and military competition with a group of somewhat poorer communist societies in the sphere of power and under the leadership of the Soviet Union. A significant part of this conflict was played outside these two camps in the Third World.

End of the eighties, the communist world collapsed, and the international system of the Cold War was history. In the world after the cold war, the most important distinctions between peoples are no longer of ideological, political or economic nature, but they are cultural in nature (Huntington, SP, 2006/2007) "The people are defined by origin, religion, language, history , values, customs and institutions. They identify with cultural groups: tribes, ethnic groups, religious communities, nations and, at the broadest level, culture circles.

Samuel P. Huntington argues about the most important groupings of states in the seven or eight culture circles throughout the world.

"The international system of the 21 Century, "remarked Henry Kissinger," will have at least six major powers - the U.S., Europe, China, Japan, Russia and probably India - along with a variety of medium-sized and smaller countries. "(Kissinger, AH, 1994)

Kissinger's six major powers belong to five very different cultures, and also there are important Islamic states strategically located which, due to their population size and / or oil reserves, have a big influence on world affairs. In this new world of local politics, the politics of ethnicity and cultural backgrounds could actually be identified with the notion of global politics.

In the world after the Cold War culture is both a divisive and unifying force. People who were separated by ideology, but were unified by culture and national identity come together, lie the two German States.

The cultural affinities have a major impact on the political and economic level and a relevant example is the European Union, where economic and political integration of the desired states was reasonably successful.

While the central dividing line in Europe in the past was the iron curtain, today, in the opinion of Samuel Huntington, this line is a cultural one, that splits the peoples of Western Christianity on one side, and the Muslim and Orthodox peoples on the other.

In this order of ideas, one can understand culture as a variety of civilizations. The largest cultural unit is the cultural circle, the highest cultural group of people who are unified by common objective elements such as language, history, religion, customs, as also by subjective identification with people being part of the same cultural background. They are durable and developing, adaptable, and could be described as "realities of a long, interminable duration. (Fernand Braudel, 2000).

According to the theory of Carroll Quigley, the West seems to be in the process, ready to step out of a conflict phase. The Western culture has become a safety zone, within the West wars have at least become literally unthinkable. The West developed today up to the equivalent of a world empire in the form of a complex system of government related states, regions and other types of institutions of cooperation, which embody the cultural level too and which assure the binding of the West to democratic and pluralistic politics. "The West is, in short, a mature society now at the threshold of what future generations come to be regarded as a golden age, a period of peace that results, according to Quigley, from the absence of rival units in the interior of that civilization, and from the remoteness or the lack of fights with other societies outside of them. "(Huntington, SP, 2006/2007).

At least two features, the religion and the language, should be respected in a classification of countries in cultures and in a restriction of western cultural group. Samuel Huntington has designed a description of the countries that are included in this kind of family. The basic assumptions which are available here are that people which associate themselves with each other, which have the "same origin, religion and language, the same values and institutions and distance themselves from those who have not" (Huntington, SP, 2006/2007).

Samuel Huntington has tried to make a clear demarcation of the countries that exist within the West cultural circle.

He believes that the core states of the European Union, Germany and France, are at the heart of Western European civilization. A division of the European Union based on the year when the states became members is a possible answer to the question: Where are the borders of Europe, which can be regarded as a cultural district?

Samuel Huntington believes that the most complete answer to this question could be provided from the great historical dividing line that separates from centuries the Western Christian peoples from the muslimic and Orthodox peoples. In the north, this symbolic line runs along the present-day border between Finland and Russia and the Baltic States (Estonia, Latvia, Lithuania) and Russia, through the western Belarus, the Ukraine, by Romania, where it separates Transylvania from the rest of the country. In his opinion, this line is the cultural border of Europe. The Europe ends where Western Christianity ends and Islam and Orthodoxy begin.

After describing the significance of culture from an anthropological and historic-political point of view, the other relevant perspective to the present research is given by Geert Hofstede. He considers culture : "The collective programming of the mind which distinguishes members of one group or category of people from another." (Hofstede, G., 1999).

He makes a clear distinction between national culture and the culture of an organization and explains this difference by the nature of membership in such a culture, whether the choice to identify yourself as member of a culture is arbitrary or not.

Geert Hofstede describes the level and the factors that determine the cultural influence, as follows: "From many other terms used to describe the manifestation of culture following four together cover the total concept rather neatly: symbols, heroes, rituals, and values. These can be imagined as the skins of onion, symbols representing the most superficial layers and values the deepest manifestations of culture, with heroes and rituals in between". (Hofstede, G., 1999).

By symbols, he refers to the language, words, images, gestures or objects that have a special meaning for a group of persons who are members of a common group. The heroes are another factor whose influence can be observed within a culture. The heroes transmit behavior patterns. The rituals are activities that are made by the members of a community and are perceived within this community as essential. The implementation of these rituals have an important social significance. The internal aspects of rituals, symbols, and the importance of heroes are high only for the members of the community, whose cultural heritage they are engaged to and for which this is meaningful and exert an extraordinary influence on.

The core of the cultural aspects are the values. The values are defined by Geert Hofstede as the trends and preferences that we have and are divided into positive or negative (Hofstede, G., 1999).

Psychological research has shown that the values are accumulated unconsciously in the first ten years of life, and that this could not be observed directly from outside, but from the deeds and are derived from the behavior of a person. At this level, a clear difference between cultures is easily observable, because the cultures and the values that are determined within the cultures, strongly differ from one culture to another. The values that we assume as the basis of an activity are determined by the family or the social "micro-world" of one person, that she later developed within the school system. Hofstede describes, in this sense, the distinction between national cultures and organizational cultures. This difference is that membership is determined in a national culture of acceptance of certain values. In relation to this, the organisational cultures are determined of practices rather than values, and that makes them manageable because they are more aware than are unconscious.

Geert Hofstede has developed his research in this direction and he has observed five dimensions that determine the differences between cultures. These are: power distance, individualism or collectivism, masculinity or femininity, risk aversion and short-term-orientation.

According to this view, Romania is not in its whole, in Europe, but rather in the Eastern world, thanks to the history and religion of this country. The country is divided into two parts, the fact that underlines and ensures the regional disparities within Romania.

Because he calls the language and the religion of a people as the basic elements of the identity of this people, a study of the Romania on the basis of these characteristics is possible. Romania has a Latin language as the national language, Romanian. This language contains not only elements of Latin descent, but also elements of Slavic languages or languages of the peoples who have lived for a some

time together with the Romanian people, as the German or Hungarian people in Transylvania.

Romania from the cultural perspective

This country could also be characterized according to the indexes developed by Hofstede. According to the research conducted by Geert Hofstede, the Power Distance Index represents the way how the problem of inequality between people within a culture is perceived by the members of this culture.

When one realizes the characterization on the basis of the indicators of Geert Hofstede, one can find the following aspects. In some considerations, Romania is compared to Germany, because of the different cultural background, but also based on the important role that the German speakers investors play in Romania:

- In Romania, the social status of an important person and the rules that have been noticed during the Education Act, remain for life to date. It is an important degree of respect from the parents or grandparents, to authority in general and the distance between the links is an authoritarian relationship great.
- Romania is a collectivist country, unlike Germany, which is more individualistic. This means that the independence of a person and that person will be assessed reasure important decisions at the meeting in Germany more than in Romania. Both countries have an average value of masculinity. This means that the role of men and women in society are clearly defined and that somehow you know exactly what rules we should note, why, and that these rules remain constant.
- The Romanian people is expressive and more tied to the belief that there are certain values unchanged, must keep the man. Here are determined, for example, clear rules, in relation to what is allowed and what is not, what is "true" or wrong as moral principles.

Having as background 50 years of communist oppression, Romania still recovers. The transition from communism began in 1989 „with a largely obsolete industrial base and a pattern of output unsuited to the country’s needs. Romania’s macroeconomic gains have only recently started to spur creation of a middle class and address Romania’s widespread poverty”(www.cia.gov).

The cultural and business environment in Romania have been characterized by a study created by the consultancy company Horvath & Partners as being very optimistic. The Austrian managers, who were interviewed during this study, also declared their dissatisfaction due to the large bureaucracy. According to the same study, the Romanian style of management is patriarchic, characterized by a lack of responsibility and a reactive behaviour of the employees. The employees motivation and the respect of the contractual relations were evaluated from the Austrian managers as balanced.

Empirical research

The attempt of identifying a Romanian managerial style involves the pursuit of identifying a Romanian comportamental pattern. Therefore, our research is conducted towards discovering the main features of the Romanian consumer of clothing products. The research was conducted, in a first part, on 150 women aged 20-45 years. Also, the results of this research were used for the management of the

company Held Fashion in Cluj in order to adapt the managerial style and the subjective qualitative standards to the consumer needs.

Research question 1: Influence of price on buying decision

Research question 2: Influence of religion on buying decision

Research question 3: Influence of brand and reputation on the buying decision

We have chosen this category because it corresponds to the target audience for the products of fashion here. This survey was conducted in Romania, Cluj.

On the first question: "How important is the dress for you?", 33 percent of people responded that the clothing has a mediocre importance. For other important and 33 percent of the clothes for the other 33 percent is the clothing is very important. 50 percent of the respondents (the majority) believe that the brand of a product carries a mediocre effect on the purchase and have this factor a score of 3 (mediocre influence awarded).

The price received for 40 percent of respondents note 4, which describes an important influence of this factor on the decision regarding the purchase of clothing. 55 percent of respondents believe that the benefits of an apparel product is very important in the purchase decision and have given this factor a score of 5. 35 percent of respondents have given for the substance of the clothing the grade 5, which indicated that the substance of clothing also carries a major influence on purchasing

By comparison, 40 percent of respondents replied that fashion a moderate influence on the decision to buy is exercised and have for this factor the score awarded 3. 40 percent of the respondents have assigned to the description of the influence of friends on the making the grade 2, which describes a small influence. The influence of religion on the purchase meets a maximum percentage of 45 percent of respondents who believe that the influence of religion is very low. Only 5 percent of respondents believe that religion exerts a great influence on the decision to give in proportion to 25 percent to this factor, the grade 4, which describes a large influence of religion. 35 percent of respondents to the influence of the family on the purchase, the Grade 3, that is a big influence. Only 15 percent of respondents believe that the family exercises a great influence on the buying decision.

The results of the responses to question number two from the survey highlight the fact that the most important factors in their choice of the sample (Romanian women, aged 20-45 years) of the benefits of the product and the substance. Other factors, like the price, exert a great influence, then the brand, the fashion and the opinions of family members. The opinions of friends and practice the religion the least impact on the purchasing decision.

The next question examined the influence exerted by the fashion magazines on the buying decision of consumers. 40 percent of consumers think that the fashion magazines do not affect their buying decision, and 40 percent believe that the effect is moderate. In the next issue, the consumers had to define the quality of clothing with your own keywords. 55 percent have described the quality of the material as fundamental and 35 percent have called the aesthetics qualities of a garment. 55 percent of respondents said they would choose the German product, in contrast to the Romanian product if they should choose on the basis of this criterion. In accordance to my 90 percent of respondents said that the phrase "meets the high

quality products," the German products. 50 percent of respondents believe that correspond to the United Kingdom also products with high quality. Other countries that have been selected are: France – 45 percent, USA – 40 percent, Romania – 30 percent. It should be noted that consumers had the opportunity to select more than one country.

The survey was conducted on a sample of 20 women, aged 30-50 years, with an average monthly income available for shopping of 350-1000 RON, with a university education.

Conclusions and empirical findings

The research conducted was part of a most wide project, which had as purpose identifying the factors that mostly exert an important influence on the buying decision of the Romanian clothing consumer, in order to show to which extent a German company that produces clothing for Germany and Romania should differentiate between the two categories of consumers, to which extent the management should change their style and their approach mostly about quality management.

The results from the partially research which is the object of this article show the following:

Research question 1: The price exerts an important influence on the buying decision of the Romanian consumers. That means that, especially when we think about clothing, the buying decision is rather rational, because 40 percent of the respondents perceive the price as being important. Mostly, in countries from the European Union, like France and Germany, and also in the United States, Peterson and Jolibert (Peterson, Jolibert, 1976) identify a strong correlation between quality and the price. The consumers from these countries associate the high price with a high quality. Our research does not give any indicators this respect, but shows that the Romanian consumers give a strong importance to the price of the clothing, when purchasing it. Also, this indicates that the Romanian consumer that was the object of the present research has a rational approach and, which suggests that the management can adopt the pricing strategy when addressing to this market niche.

Research question 2: even if Samuel Huntington classified Romania at the border of the western culture circle, the fact that the religion does not exert a significant influence on the buying decision of the Romanian women shows that his opinion is, from this perspective, irrelevant and is not sustained from this empiric study. This result could also be explained through the particularities of the consumers that were the subject of our research, women with a university degree and with a monthly amount of money for shopping more than average, consumers that are rather modern in their mentality and shopping behaviour.

Research question 3: the research conducted by us reveals the fact that the brand and reputation are of a medium importance for the consumers in influencing their buying decision. This result verifies the empirical research conducted by Cuttin and associates in 1982, which shows that consumers and managers associate to their products different importance, according to their provenience, suggested by „Made in...” information. Therefore, the Romanian consumer is also receptive at the brand-

related aspects of the products. This result shows that the importance that the management should give to branding campaigns is very high and that the romanian consumer is also very receptive to well known brands. The role of management is of high importance, because it depends on their deeds that the name of the product becomes a brand, because, like Essig, Soulas de Russel and Semanakova note in their book from 2003, only the products that are perceived by the consumer as brands will be named and considered as being brands. That is why the brand is, actually, the idea of a consumer about a product.

This research shows that, from the perspective of their positioning on the market respective the price, the managers on the romanian market should take into consideration the rational approach of the romanian consumer. The meaning of religion is not significant for the romanian clothing consumer, which shows that this important aspect from the cultural point of view is rather irrelevant from this point of view. The approach of the consumers to the brand shows a field full of opportunities for the romanian managers from this industry. That means that the management has to invest a lot in image and publicity because the romanian consumer reacts positively at names and brands, at least in this industry.

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A Training Program and the European Certification on International Online Project Management

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Abstract

Purpose – investigation of training requirements, didactical approaches and certification processes for a new and complex competency profile related to international online project management using virtual collaborative environments.

Methodology/approach – an European survey among a high number of companies and consulting experts in project management is the basis of the definition of a training programme according to state of the art standards. Blended learning methodology supported by practical on-job project simulation has been developed and a certification process has been set up and piloted.

Findings – the methodology has been successfully piloted with representants of multinational companies. This paper expands the findings on: overcoming traditional training methods, breaking the barriers of training 'off-the-job' and experiences in establishing certification programme.

Research limitations/implications – the limits concern the various accreditation procedures in different countries and the necessity to customize the certification process.

Practical implications – positive challenges in running international projects, as most of the communication and teamwork takes place in a virtual setting.

Originality/value – a unique training and certification programme combining project management, intercultural communication and online-collaboration at international level is proposed. It is an important extension of existing training and certification approaches and it enforces the transparency of competencies on international online project management.

Key words: online, project, management

Introduction

The management of international, virtual projects requires advanced competencies, which have to be acquired by project-managers and project teams, especially in the area of intercultural communication, virtual collaboration, soft-skills, risk-management and project performance measurement. The application of ICT for virtual collaboration is a very important challenge in international projects, because the most of the communication and teamwork takes place in a virtual setting (Cleland and Gareis, 2004). The development of e-business applications is also increasing the demand for individuals with creativity and higher-level conceptual skills that will enable enterprises to increase productivity and harness ICT to produce greater economic value. The EU and the local governments are promoting and funding multilateral and international projects, because the combination of different know-how of different countries and/or different companies/organizations is crucial to the development of innovative products and services. As a result, the number of international projects will increase in the next 5 to 7 years and emphasizes the need for competencies in international, virtual project management (Herber, Haber and Mayr, 2009).

Nevertheless competencies in international, virtual project-management are hardly addressed by training institutions in Europe (Giurgiu, 2005). Most of them focus on the hard facts of project-management and do not get in touch with intercultural issues and aspects of virtual collaboration at the international level. The lack of those competencies is best shown by the competence profile of the International Project Management Association (IPMA) and Project Management Institute (PMI). The project "Pool2Business" (Pool2Business, 2010) addresses exactly those gaps of competencies (Giurgiu, 2010).

The results reported in this paper refer to the implemented training and certification programme in “Pool2Business” (P2B) project. The developed training schemes are mainly addressed to company employees, which already work on national projects, wishing to upgrade their existing project management skills with the additional competencies needed for managing international, virtual projects (Herber, Haber and Mayr, 2009) (Giurgiu, 2010). It means that the proposed solutions do not fully focus on the training of basic project management skills, because they are already established very well in training institutes in Europe. We propose a unique training and certification programme combining intercultural communication and online-collaboration aspects at an international level. It is an important extension of existing training and certification approaches (e.g. PMI, IPMA) and enforces the transparency of competencies at European level.

Training needs analysis and definition of required competencies

In order to identify the training needs for international Online Project Management (OPM) we have cooperated, in a first step, with several experts involved in management consulting. In the second step, in spring 2009 it was conducted a survey among 85 representative companies located in the countries of the Pool2Business project and running international projects. A strong focus has been put on the requirements and shortcomings detected by an in-depth qualitative and quantitative research, and few examples are given below.

Most companies participating in the survey rely on their own project management methods and standards in international projects (Fig.1). Only barely a third of all questioned companies have an international project management standard implemented. About 28,2 percent rely on own standards, the majority (42,4 percent) have no standard implemented.

Expectedly, it has been found that good communication is at the top of the hit list of the key success factors in international projects (Figure 2). About 80 percent of all participants rely on a good communication to be able to work on an international project successfully. Personal contact and communication to all project stakeholders seems to be very important (42,4 percent), though it may be linked to higher communication costs. In this context, also the knowledge of the project language is named as a very important factor for project success (38,8 percent).

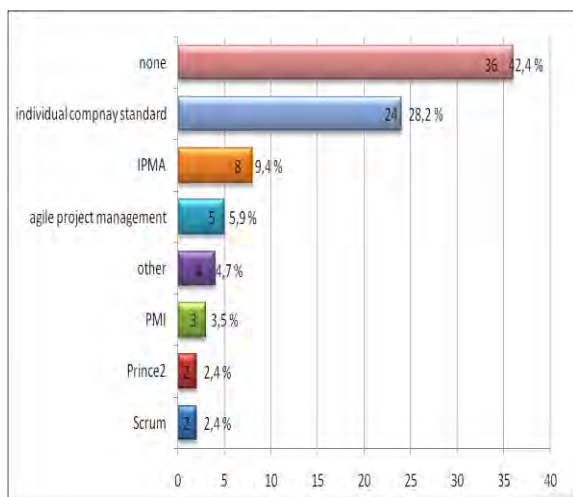


Fig.1. Implementation of PM standards

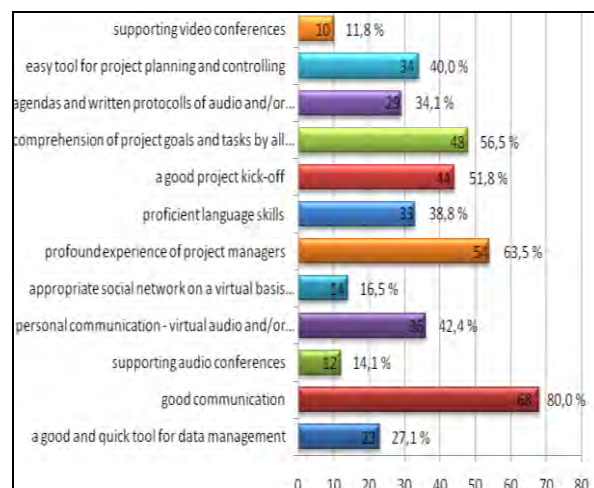


Fig.2. Key success factors

It was identified that knowledge management in international project management is a big weak point. 87% of the questioned companies admit very high importance to knowledge management, but in most of the companies it happens unstructured, orally and only by case. Project members and managers exchange their experience and information only informally, so that very valuable knowledge is not transferred into the company (Herber, Haber and Mayr, 2009).

A core aspect of international projects is the education of project managers and members. It was identified that only one third of all project managers have an international project management education, this also only in course of their preceding academic education. Looking at the education of project members, who are not of minor importance for international projects, the education rates are even lower.

The synthesis of the shortcomings of the real business is presented below:

- unstructured communication is a weakness in international project management
- virtual project organisation leads to goal conflicts between different locations
- simple collaboration technology (e-Mails, file repository, intranet and project portals) is predominant in practice; usability, safety and technical availability are most important
- know-how is the key aspect for staffing decisions; cost arguments are secondary
- rough planning on a milestone level is preferred to detailed work break down
- PM practice uses both existing standards and individual company principles
- controlling is limited to oral or written reports, containing key facts
- English is the pre-dominant language in international projects (75 percent)
- insufficient language skills are typical obstacles in communication
- face to face kick-offs and clean communication are crucial to prevent failure
- basic PM principles also apply to OPM; differences appear across branches and cultures.

Deriving from these findings we have identified training needs and competencies focusing on the following key areas:

- Fundamental information related to OPM:
 - characteristics of international projects
 - managing projects in dynamic environments
 - domestic vs. international project management
 - tasks, role types and characteristics in online projects
 - typical life cycles of online / distributed project
 - the excellent international project manager
 - the excellent online project manager
 - online project success factors
 - applicability of PM standards
- Virtual communication and collaboration in online projects:
 - online collaboration techniques
 - effective communication strategies and technologies
 - collaborative information engineering
 - basics of online project management and collaboration
 - knowledge management and its use in distributed teams

- aspects of online knowledge transfer, communication and e-learning
- software solutions for online collaboration and project management
- Soft skills, intercultural communication, and documentation in online projects:
 - effective communication online
 - intercultural aspects in international projects
 - communicating with persons from different cultural backgrounds
 - negotiating and co-operating in different cultures
 - differences of organizational cultures and work attitudes
 - managing foreign work structures and multinational teams
- Project planning, time management and risk management in online projects:
 - planning and scheduling techniques for distributed work
 - setting up international calendars and scheduling approaches
 - collection of online data in online collaboration environments'
 - creating relationships between teams in online environment
 - troubleshooting in transnational teams
 - international risks and risk analysis in international settings

According to the above cited competencies, a competency profile has been defined, that is in line with the efforts of the IEEE Learning Technology Standards Committee (LTSC) and their standard (IEEE WG20: 2004).

Didactic approach and e-Learning materials

Pool2Business training programme has been designed such as to follow a blended learning approach. Teaching and Learning takes place through a wide variety of methods and styles applied in an interdisciplinary context. A majority of the training takes place online, highly participative and interactive, encouraging learners to collaborate. It utilizes both online, offline and collaborative scenarios to their full potentials and provides the most effective form of teaching and learning. The didactic approach exploits the advantages of blended learning and project integrated learning.

A blend of learning methods enables the highest flexibility in developing an understanding of the basic concepts of OPM. The difference to traditional learning lies in the diversity and interactivity of media: the exploitation of online technology and multi media in the learning process enables learners to learn independently from others, strongly self-directed, and in a flexible way. It encourages different learning styles and motives of learners. Appropriate selections of learning material, effective instructional design, powerful multi media components, and appropriate use of e-Learning materials in the learning process have been incorporated in this concept.

Project integrated learning, that is the embedding of learning processes in simulated or real projects, increases the practical character of the training. Learners participate in projects and practice in an interdisciplinary array of skills from intercultural and interpersonal skills, project management and technology. The collaborative nature of these processes and the realistic project scenarios ensure highest business relevance of the training and, most important, increase practical learning outcomes.

Overall, the didactic approach is based on self-directed knowledge and skills acquisition rather than enforced learning. Learning is seen in real-life situations in which

learners can acquire the skills they need for their work. Knowledge and practice become the means of learning.

The courses have been structured on three levels: conversion course, basic course and advanced course.

Table 1. The training levels of available Pool2Business courses

Module Level:	Conversion	Basic	Advanced
Course type:	Preparatory course	Fundamental training	Practical training
Target group:	Learners with lack of prequalification	OPM learners	OPM practitioners
Language:	English	English	English
Prerequisites (recommended):	Formal PM education	PM experience (1 year) or Conversion course	OPM experience (1 year) or Basic course
Course:	Preparatory	Task centred	Problem centred
Effort hours:	15 hours	50 hours	100 hours
Credit:	-	2 ECTS	4 ECTS
Duration :	1 month	4 months	6 months
Entry:	anytime	anytime	semester / year
Pass requirements:	100% attendance 80% success rate	80% attendance 80% success rate	80% attendance 80% success rate

The conversion course is for learners whose previous education and/or experience does not qualify them to enroll in the Pool2Business basic or advanced training programme, but who wish to acquire knowledge in OPM. Its main objective is to harmonize the knowledge of a heterogeneous group of regular Pool2Business learners.

The basic course creates a fundamental understanding of the characteristics of international OPM and the difference to traditional Project Management (PM), explains typical problems and shortcomings of OPM in practice, and develops skills that will help learners to prevent or overcome these problems in real projects.

The advanced course strongly focuses on the development of practical skills that are required in online projects. It explains best practices, tools and techniques that learners can apply in their own project management activities. In practical (simulation) projects, learners collaborate in group projects and develop practical skills of managing projects online.

The recommended module structure in the form of e-Learning materials for the basic course, as an example, is presented in Table 2. The following training stages are specifically applied in this course:

Stage 1 (self-study period): during this stage, learners go through a self-study working with a selection of core e-Learning modules. They will develop an understanding of the core principles of OPM. To deepen the understanding, the learners shall make use of the existing training networks and the available feedback channels.

Stage 2 (practical training, independent learning, instructional training, networking): learners work on individual exercises and case studies to gain practical training.

These exercises and case studies have a problem-oriented approach. This stage involves online collaboration tools at user level. In regular intervals, learners can additionally attend online coaching sessions in which they will receive additional information. Learners work through this stage under guidance of a tutor / trainer.

Stage 3 (assessment): learners are asked to perform, alone or in a small group, a specific exercise as part of a final exam. The results are evaluated by the tutors / trainers who have been playing the role of the online coaching in the online sessions.

Table 2. The module structure for the “Basic Course”

Stage #	Course Topics	Concept	Time
Stage 1	Introduction into online projects (Fundamentals, roles and types)	Self-Study	2 hrs
Stage 1	Understanding virtual collaboration in OPM	Self-Study	5 hrs
Stage 1	Understanding project planning, time and risk management in online projects	Self-Study	5 hrs
Stage 1	Understanding soft skills and intercultural communication in online projects	Self-Study	5 hrs
Stage 2	Case study reviews and exercises	Practical	8 hrs
Stage 2	Avoiding goal conflicts in virtual projects	Independent learning	2 hrs
Stage 2	Keeping team work efficient in distributed projects		2 hrs
Stage 2	Appropriate communication tools & strategies for the online project		2 hrs
Stage 2	Improving performance through distributed planning techniques		2 hrs
Stage 2	Various additional e-Learning modules		2 hrs
Stage 2	Regular online coaching sessions		Instructional
Stage 2	Networking	Networking	-
Stage 3	Final case study module	Assessment	10 hr

The implemented training programmes have e-Learning modules at each of the three levels and that help the learners acquire basic knowledge and skills for professional development and independent study. A large number of the e-Learning modules are web based learning material provided through the Pool2Business learning management system (MOODLE).

In every module, learners are required to complete quizzes, assignments and/or assessments associated with the processes of the project management life cycle to enable them to assess their learning progress. They can be used by the learners to test their understanding of the concepts and their ability to evaluate and adapt those to various project situations.

The following resources are directly involved in the training:

- Web Based Trainings (e-Learning modules developed by consortium members for their basic training programme or e-Learning materials of third party providers, e.g. open educational resources)
- Case Studies & Best Practice Reports (they are applied to support the theoretical concepts explained in the training modules as well as to transfer the knowledge into practical settings)

- OPM Glossary & WIKI, (they are used to create a common sense and terminology on important OPM concepts / it can be an important means of dissemination)
- Pool2Business Handbook (important experiences collected throughout the previous trainings are collected in a handbook and provided to trainers). It collects all lessons learned throughout the training programme and it is involved in the training process in the form of a storyboard for case studies and best practice examples)



Figure 3. Examples of e-Learning units from the “Basic Course”

The collection of e-Learning modules (Figure 3) provide important theoretical concepts, but also explain best practice scenarios, tools and techniques that learners can apply in their own project management activities. In every module, learners should be required to complete quizzes, assignments and/or assessments associated with the processes of the project management life cycle to enable them to assess their learning progress.

The certification process

It is proposed a certification process which is aimed to improve the transparency of competencies at an European level. The importance of an international certification in conventional project-management shows that at the end of 2006 more than 60.000 employees from companies and organisations were registered as certified project manager at the IPMA. In 2007 about 1500 people got a certification in project management. The project develops a unique training and certification programme combining intercultural communication and online-collaboration aspects at an international level. It is an important extension of existing training and certification approaches (e.g. PMI, IPMA) and enforces the transparency of competencies at an European level.

The assessment framework, on which the certification process is based, carefully considers the following aspects:

- learning outcomes: for each training stage several learning outcomes have been defined in the form of skills, competencies and knowledge;

- assessment criteria: they make the assessment more measurable and comparable;
- assessment implementation: define a Bloom taxonomy for the questions, create them and import in the virtual learning environment;
- grading/judging: the assessment server produce automatic grading;
- feedback: this is produce automatically and delivered immediately to the assessed trainee and to the trainer;
- assessment outcome: produce quality indicators on the previously defined learning outcomes and achieved assessment performance.

The training programme already provides certification that meets the needs of PM professionals in a way that adds value in the current business environment. The P2B certification is not yet widely recognised and will have to become established in the PM marketplace. The distinguishing features of the programme are that it focuses on international Project Management in a virtual environment, and it is delivered on-line.

Discussion and conclusions

Considering the target groups and nature of OPM training, Pool2Business designed and managed a training program that is based on self-directed knowledge and skills acquisition which adjusts to the needs of industries. This has implications on various aspects: training organization, integration into the work environment, and the certification of such programs. The whole curriculum design has been based on a project management procedure in which the key steps has been structured in different tasks and milestones, which have been tested by a quality assurance circle.

The training program follows an interdisciplinary approach (project planning, virtual collaboration, intercultural communication) of theory and practice, which uses merely online learning to provide a thorough understanding of important online concepts in distributed work and learning situations. It uses collaborative project scenarios to enable practical training and skills acquisition embedded in the work environment. The intention is to ensure that knowledge is acquired on-the-job and applied in real projects rather than to explain them in theory.

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Change Management in Industrial Management

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Abstract

Purpose - the purpose of this paper is to define the concept of change management accepted, practiced and implemented in the Romanian enterprises.

Methodology/approach - the approach was made from the perspective of quantifying the level of comprehension and implementation of the change management concept by the Romanian human resources with managerial attributions.

For measuring the degree of awareness and applicability of change management in the Romanian enterprises, a questionnaire was applied to the managers from five hundred and forty enterprises.

Findings - the results confirmed that change management is characterized by some generalities: the concept of "organizational culture" is underdeveloped in the Romanian enterprises, change is perceived with fear and resistance as insecurity, uncertainty and the managers have an unproductive attitude towards "the value of information".

Practical implications - the research implications consist in underlining the attitudes and beliefs of the Romanian managerial labor force. This paper recommends models, which can improve the change management processes (generate positive change) in the Romanian enterprises, if used right and dutifully.

Originality/value - the value created by this study is putting into light the poor theoretical change management knowledge of the Romanian manager who finds himself at the end of a two decades transition of managerial paradigm, finally embracing the "western business ways".

Key words: Change Management, Market Research, Romania

Introduction

Change is life.

Along the history one can observe after analyzing the evolution of the human society that the knowledge on us and what is around us became more and more complex and vast; from the ancient Egyptians, skilled in mathematics and astrology, until now when we are able to evaluate through super computers theories like the Big Bang. In the context of our work, it is worth mentioning, that all this time, there was a constant that did not change at all: change itself. Technological development drew humankind to innovation and to pushing the limits of knowledge and human condition.

From this argument and other studies on change management (Beer, Eisenstat and Spector, 1990; Scott, 2003; Curri, 2007; Heda and Nagrat, 2007; Nauheimer, 2008; IEE, 2010) we concluded that technological development is one of the biggest change drivers from the environments in which the enterprise is operating. Under the circumstances of the technological development we consider industrial management the right dimension and approach on discussing change management features known and practiced in Romania.

Industrial management gathers more than a century of studies and practices that had the aim to increase performance of production, improve work conditions, and foster the vision of sustainability. This could be done through by considering following two viewpoints, which build the industrial management paradigm, as equally important: the management of the machine and the management of the human resources. The

principles of scientific management have been extended in every industry and in all of its departments.

Change is produced, induced and assimilated in every corner of an enterprise with inter- and intra-industrial implications. That is why this research focuses on how change management is understood and dealt with in the Romanian enterprises with different industrial backgrounds.

What is Change Management for the Romanian Managers?

In the spring of 2009 between first of March and first of June, an empirical study was undertaken on a sample of five hundred and forty managers from Romania with the goal to put into light the theoretical level of comprehension of this issue. We considered this sort of analysis relevant in defining the present stage of the concept of change management in Romanian enterprises.

The research problem was to define a current stage of theoretical understanding and practical applicability of change management in the Romanian SME's (small and middle enterprises). Following main subjects were questioned:

- the degree of knowledge of the manager regarding the subject of change management;
- if the milestones and steps of the change management process are known, kept and taken into consideration;
- the success in breaking the barriers of change in the enterprise;
- is change management understood as a participatory process or not;
- what is the efficiency of the communication inside and outside the enterprise.

For measuring the degree of understanding, awareness, and applicability of change management in the Romanian enterprises, the sociologic questionnaire has been used as a research technique within the framework of the empiric primary method of market research. The analysis was applied by questioning the subjects involved – i.e. the managers. A questionnaire has been designed for this study. It should be underlined that along the sociologic study, due to the questions asked, there was a mutual agreement about the confidential character of the data involved (name of subjects, name of enterprises). The results and the statistics obtained reveal the managers' personal opinion about the development of change management in the enterprises they work.

In order to obtain concluding and objective results, the subjects were chosen from different industries and different fields of activity. The questionnaire was sent through the electronic mailbox and we got a nine point forty eight percent answer rate – which means that fifty three subjects honored our sociologic research. The close to ten percent represent a relative high response rate for such a research (the average is two to three percent), that could be also an indicator that the change management problem raises a large interest among the managers.

Table 1 Questionnaire – ‘Change Management’

Topic: “Change Management”. Scale: “1” to “5”, “5” being the degree of the highest occurrence.	1	2	3	4	5
1. At what degree is the concept of change management familiar to you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How often are you using in your enterprise models and methods characteristic for change management?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. What score would you attribute to the success degree of the activity of breaking change barriers in your enterprise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. At what degree is the change in your enterprise considered to be a participative process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. How would you evaluate the intra and extra organizational communication characteristic for the enterprise you are working in?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The questionnaire consists in five pre-selected questions – we considered this number of questions appropriate to increase the chances of a feedback. The five closed questions were graded on a scale from ‘1’ to ‘5’, ‘5’ being the highest occurrence grade.

As we were constructing the questionnaire, we took notices on the following guidelines:

- the sociologic research requires a high number of subjects in order to reach a high degree of generalization;
- the electronic mail was considered the appropriate tool for meeting the sufficient and necessary conditions for putting into light a general opinion on the change management practiced in Romania;
- the majority of the managers who participated at the research could have not been contacted in any other way than the chosen one;
- the given financial, temporal and human resources at the time of the research were not sufficient for any other approach in physical format.

The actual results expressed in percent are the following:

- Round thirty percent of the subjects are familiar with the term ‘change management’;
- Under six percent use theoretical models and techniques dedicated to the implementation of the change in an enterprise;
- Under twenty percent manage to deal effectively with resistance to change in their enterprise;
- Under sixty percent of the subjects consider making change happen in an enterprise a participatory process;
- Over seventy percent believe that they communicate effectively inside and outside the enterprise.

The results are slightly in contradiction to the general opinion of several Romanian specialists in the field of human resources (HR), coaching, training or counseling that change management – as a proceeding process applied in the Romanian enterprises – is characterized by several general features:

- Written research and interviews mention that the integration in the European Union and its socio-economic consequences oblige the Romanian enterprises to completely reconsider the field of human resources as result of spreading the concept the concept “organizational culture” which stems from “replacing the loyalty for one person (specific in communism) with the loyalty for the enterprise” (Stavre, 2005). By loyalty for organization we mean managing the organization according to the needs of all the stakeholders from that particular business environment; this idea is mirrored in the results of question one where we can observe that only round thirty percent of the subjects are familiar with the concept of change management. This shows that this concept is very new in Romania but the premises of it entering in this region are catalyzed by the mechanisms of the European Union;
- The lack of Romanian managers’ capability of thinking in long-term projects; this is owing to the economic environment of the 90’s: “They are the champions of short-term businesses, of “the tricks” ever harder to perform in a regulated economy, as that of the countries members of the European Union”. (Stavre, 2005); from this perspective we can conclude putting the results of question two in foreground, at which only one manager gave the full score, that in most of the cases, change in a Romanian enterprise is planned and implemented unprofessionally, without serious documentation from the employed human resources with managerial attributions;
- The greatest shortcoming in the change management process is resistance to change, due mainly to the fears and economic insecurity (extremely numerous, especially in crisis moments - loss of salary, threat of one’s workplace), the change is perceived as uncertainty; this general opinion is confirmed by question three from our questionnaire, through the fact that over eighty percent of the managers asked, confront with resistance to change;
- Romanian managers communicate with difficulty – internally, within the company; - externally, especially in their relationships with the media. A possible explanation could be the attitude towards the “value of information” which is considered in most of the cases to be equivalent to the financial resources. If the access to the primary information is quite easy, the synthetic information – capable to indicate the tendency or trend in a specific area – is not always accessible and involves power; this thoughts could be associated to the answers of the last two questions of the questionnaire dealing with communication and participation;
- The contradiction lays in the fact that more of the half of the managers consider to be communicating and involving everyone in the change process but fewer than twenty percent, manage to break change barriers; only one manager in fifty-three others is informed about and puts into practice theoretical models and proven techniques.

Considerations on Two Theoretical Change Models

When the change is inevitable to-, or anticipated by the management stuff or the other human resources of an enterprise an activity for dealing with it is necessary. This activity is called change management. Change management is the part of the economic sciences that encompasses the set of disciplines, abilities and techniques through

which the need to alter complex systems is transformed, in the context of a strategy, into actions and results.

The specialized literature, in its *theoretical background*, offers a wide range of models, which describe the process of change or define the general norms. This chapter will briefly discuss theoretical models that are considered relevant for change management practices suited to the present Romanian, economic reality. These have been created because of several empirical studies that have assessed and described the factual development of change processes, as well as by creating some regulatory patterns, which offer directions about the way in which a change process may occur.

The first descriptive model, with the focus on change management, we are discussing is the Corporate Renewal Model built by the professors Sumantra Ghoshal and Christopher A. Barlett. In their paper “Rebuilding Behavioral Context: A Blueprint for Corporate Renewal” the authors present after a complex research period that the change in the enterprises monitored was as well assimilated as precise the model was followed.

The first supposition is that the strength of an enterprise originates from the force of every one of its units and from the efficiency of their interdependence. The second one promotes the idea that the true change of the enterprise derives from the alteration process of its organizational culture.

The model delimitates three steps: The Simplification, The Integration and The Re-generation:

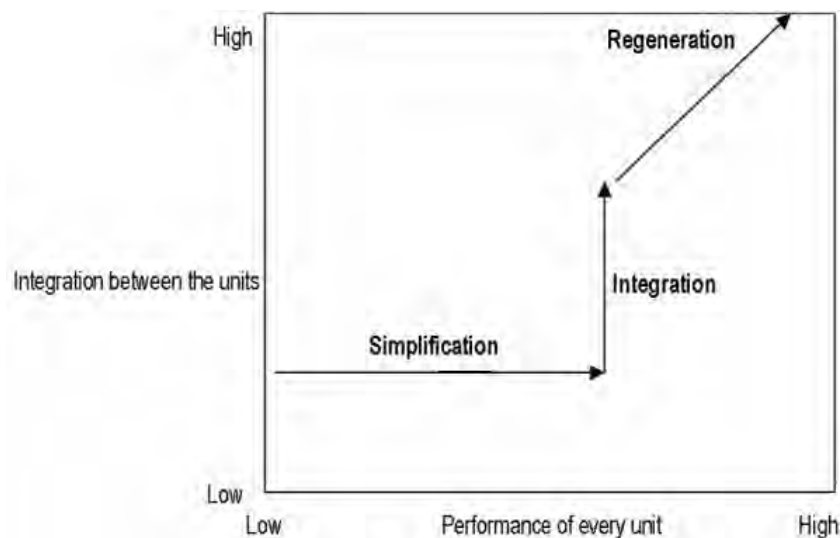


Fig.1. Graphical Representation 1

In the first phase, the performance of every single unit of the enterprise has to be amplified; this can be done through simplifying the structures, and disciplining and mobilizing the employees. The units will be responsible of their own results through getting the status of profit centers (The Simplification). In the next phase the implementation of the integration forces between units can be undergone starting from the efficiency and effectiveness of every unit. A characteristic of this phase is adopting the Stretching Targets – a method of imposing hard achievable targets, that can be implemented through changing the attitudes and working habits of the employees

with the goal to induce a new mentality. Another characteristic of the second phase is spreading the sentiment of trust throughout the enterprise, only possible by braking the barriers between the units (The Integration). The last phase deals with putting the first to phases on a common ground through building a framework of complementarities.

The main goal and output of this model is to create a well-balanced enterprise, which finds itself in a continuous learning process and which allows the permanent renewal and adaptation to change. This descriptive model can be accepted as a reliable normative model based on the success it had when applied at General Electric Company and other well-known enterprises.

The second model, which we consider appropriate for improving the Romanian managerial activities, is based on Kurt Lewins Action-Research Process. We find Stephen P. Robbins (1993) adjusted and enhanced approach on Lewins (1958) "Three Phase Change Process" as pertinent and enlightening, adding value to the theoretical studies on normative models of the change management process. The concepts of Lewins Three Phases Model (Unfreezing, Moving, Refreezing) are reflected in the Action-Research Model of Robbins, integrating a collaborative change management process, through a systematical research methodology, for the evaluation of the implemented changes.

The Action-Research Model describes a change process based on the systematic collecting of data, followed by the selection of the suitable change action through comparing the indications/results of the analyzed data. The visual representation of the process is as follows:

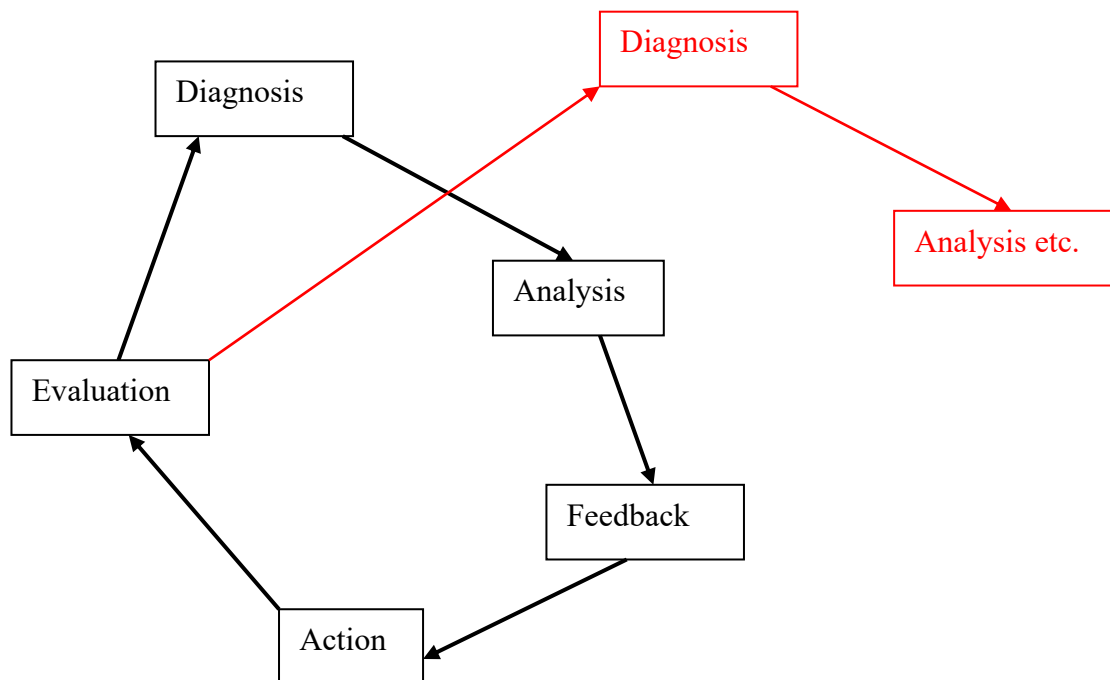


Fig. 2. Graphical Representation 2

For conducting the described process a change agent, from inside or outside of the enterprise, is introduced. This agent has the duty to gather information on the status-quo of the enterprise (Diagnosis) from all the relevant, affected stakeholders and to interpret them (Analysis). The analysis of the data leads to the identification of the primary problems and their possible repercussions. The research goes back at the stakeholders in form of a report (Feedback). Together, stakeholders and change agent clarify the problem and elaborate an action plan/scenario. The Action consists in managing the methods of evaluation, monitoring or setting milestones for reporting. The final evaluations of the change and the output of change are presented to the stakeholder group and the ending or the continuing of the process is decided (Turner, Foster and Johnson, 2002).

The two models mentioned in this chapter are easy to follow and could be effective icebreakers in the Romanian practices on change management because of the following reasons:

- they point out well defined steps to be followed during the change process;
- they suit the characteristics of industrial management from both the perspectives it is operating upon: the management of the machine and the human resources;
- they are characterized by simplicity of actions needed and less guidelines which are to be followed.

Discussion and conclusions

The rapid changes of the present economic context, inside and outside the organization entail the enterprise effort to adapt to the new realities. Consequently, the current tendency is to provide new services, new products or implement new technologies and applications. Accelerating and rapid implementation of change produce, in the management of an enterprise, multiple and profound effects which, in their turn entail, methods and techniques for enhancing the speed of decisional reaction and of adapting the entire economic entity more easily to change. The present empirical research is a good opportunity of observing the impact of the western management theory of change on the Romanian managerial practices. It can also assess to a certain extent the assimilation of the subject in the national small and middle enterprises.

An effective and efficient change management process has at its root the continuous reorientation and reorganization of the managerial activities accordingly to the new theoretical researches in the fields of interest. This is followed by their integration in the managerial practices in order to renew and foster the development processes of the enterprise. Change management is the answer to the question: How can one manage update an enterprise on the social, political, technical and economical level? Through updating the enterprise, we understand the permanent aligning of the core competences and structures to the social trends, the given norms and legislations, the technological development and the permanent battle for sustainability of the business; we refer here to the core existential catalyst of every economic entity that is – making profit.

The personnel responsible with the change management in an enterprise will firstly consider the imposed strategic objectives and the milestones of the implementations process (Rusu, Pîslă and Bordea, 2004). After that, in order to foster the necessary premises needed for the implementation and control of the change, communication is imperative. The communication is in the process of change management the bridge between the trigger factors of the change and the human factors who has to perceive, assimilate and manage (with) it. The management of an enterprise has the duty and responsibility to communicate the cause, dangers, benefits and scope of the change. Efficient communication confers the enterprise a strong strategic advantage and the managerial staff of the enterprise following capabilities of: informing-training, coordination-leading, counseling-advice, convincing-influencing, motivating, interrelation, integration and maintaining. We find the following as concluding and enlightening for both the theoreticians and the practitioners of change management:

Conclusion

"There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things."

Niccolo Machiavelli
The Prince (1532)

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Opportunities for Entrepreneurship Competencies Development and Their European Certification

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Abstract

Purpose – to present the main opportunities offer by the Leonardo da Vinci project ResEUr - Certified Research-Entrepreneur (developed with the support of the European Certification and Qualification Association - ECQA) for the entrepreneurship competencies development and their European certification.

Methodology/approach –the following aspects are debated: the entrepreneurship phenomena in Europe; the entrepreneurship competencies development – case study for the Politehnica University of Timisoara, Romania (brief description of the MBA master program competencies and the ResEUr complementary competencies as main opportunities for students); conclusions and opportunities (increasing international visibility and European compatibility of the master program). The main tool used is MindManager software dedicated to the skill card representations.

Findings –important aspects of entrepreneurship education processes developed by Politehnica University of Timisoara, the Faculty of Management in Production and Transportation (UPT-MPT). The aim of this approach is to increase the university implication and contribution to human resources development with impact upon the social and economic development of the West Region.

Practical implications – the experiences gained by Politehnica University of Timisoara Romania can be extended in the case of other master and PhD students that want to qualify and to certify themselves in the entrepreneurship field.

Originality/value – The presented paper is linked with the research activities of the project: Certified EU Researcher – Entrepreneur (contract no. 503021-LLP-1-2009-1-BE-LEONARDO-LMP) and the dEUcert project - Dissemination of European Certification Schema ECQA (contract no. 505101-LLP-1-2009-1-AT-KA4-KA4MP), that has been funded with support from the European Commission.

Key words: Entrepreneurship, Education, Competencies.

Introduction – Overview of the Entrepreneurship Phenomena in Europe

The European Commission defines *Entrepreneurship* as “the mind set and process (needed) to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organization” (European Commissions, 2008a), (European Commissions, 2008c).

Small (less than 50 employees) and medium-sized (less than 250 employees) enterprises (SME) are considered the backbone of the European economy, providing jobs for millions of European citizens and are the basis for economic innovation. However, conditions for SMEs and start-up companies are not as favorable in the European Union (EU) as they are in the United States and entrepreneurial initiative and risk-taking are less developed.

Since 2002 Eurobarometer surveys found that EU citizens are less inclined to become entrepreneurs, and more risk-averse than their American or China counterparts. Once a new EU company has been created, it also tends to grow at a slower rate than in the USA. Moreover, conditions for start-up companies vary widely across Europe (European Commission, 2008b).

Analyzing the world map of high-expectations entrepreneurship there is still an *American dream* in USA – the rate of high-expectation entrepreneurship in the general

population is very high in North America, 15 in every 1,000 US adults; there is a new ambition capital of the world for China – there are more high-expectation entrepreneurs that any other country, with 17 in every 1,000 adults rate; Europe has limited levels of high-expectation entrepreneurship – just 4 in every 1,000 European adults are entrepreneurs with high-growth expectation (but EU has still the lowest level of all world regions) (Draghici and Draghici, 2006) (Tracona, 2009).

In the GEM 2008 report has demonstrated a consistent U-shaped association between a country's level of economic development and its level and type of entrepreneurial activity (Bosman et.al., 2008). The EU recognized the problem and made entrepreneurship one of the main objectives of the Lisbon agenda in 2000. Responding to this, the Commission launched a series of initiatives aimed at fostering support for small businesses in the EU. In January 2003, it adopted a "*Green Paper on Entrepreneurship in Europe*" to stimulate the debate amongst policy makers, businesses, representative organizations and experts on how entrepreneurship can be better promoted in Europe.

An entrepreneurial attitude is characterized by initiative, pro-activity, independence and innovation in personal and social life, as much as at work. It also includes motivation and determination to meet objectives, whether personal goals or aims held in common with others, including the organization level. Education can contribute to encouraging entrepreneurship, by fostering the right mindset, by raising awareness of career opportunities as an entrepreneur or a self-employed person, and by providing the relevant business skills (Izvercianu and Draghici, 2008).

Even the GEM 2008 report has a special topic regarding entrepreneurship education and training. 38 GEM countries collected additional data on entrepreneurship education and training through their Adult Population Survey. Every respondent was asked if they had had training in starting a business during or after school, and whether this was voluntary or compulsory. For after-school training, the nature of the training provider was also obtained. This provided national-level estimates of the *quantity* of entrepreneurship education and training in each nation, and of the relative importance of different types of provider (Bosman et. al., 2009), (European Commission, 2008b). The report shows that in most countries, the proportion of individuals ever having had training in starting a business decreased with age. Women were significantly more likely to have received training in starting a business than men in only one country: Latvia. In all factor-driven countries, men were significantly more likely to have received training in starting a business than women. Also, the report shows that the most frequent source of training was self-directed learning, such as reading or observing or working in other people's businesses, followed by voluntary formal education and by voluntary training provided by a college or university but outside the formal education system. Other sources, such as business or trade organizations, government agencies, or employers, typically were used by 3 percents or less of individuals. Compulsory training was rarely reported by less than 1 percent of individuals. Figure 1 shows the frequency of use of this form of training by country and they are preferred in the innovation-driven economies.

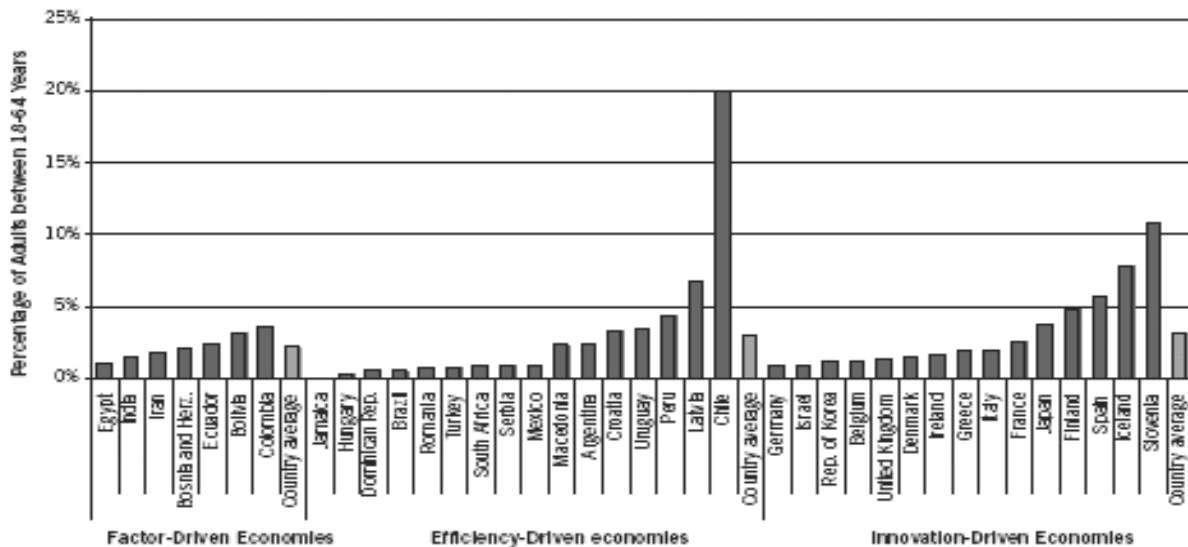


Fig. 1. Percentage of Adults Aged 18-64 Who Have Used Online Training in Starting a Business (Bosman et. al., 2008)

On the other hand, the European Commission reports in 2008, regarding entrepreneurship teaching was that it is not yet sufficiently integrated in higher education institutions' curricula. Available data show that the majority of entrepreneurship courses are offered in business and economic studies. Entrepreneurship education is particularly weak in some of the Member States that joined the EU in and after 2004. However, it is questionable whether business schools are the most appropriate place to teach entrepreneurship: innovative and viable business ideas are more likely to arise from technical, scientific and creative studies. So, the challenge is to develop interdisciplinary approaches, making entrepreneurship education accessible to all students specialization curricula, creating teams for the development and exploitation of business ideas, mixing students from economic, business, engineering studies and others with students from other faculties and with different backgrounds (by interdisciplinary training modules or courses) (Messnarz et.al., 2007), (Messnarz et.al. 2008), (Riel, 2006), (European Commission, 2008c).

In the context of this paper, human resources training regarding their entrepreneurship competencies development have to be amplifying in the high education period and it has to continue with training during all professional life (as vocational training) with the support of the dedicated lifelong learning programs. At higher education level, the primary purpose of entrepreneurship education should be to develop entrepreneurial capacities and mindsets. In this context, entrepreneurship education programs can have different objectives, such as: (1) Developing entrepreneurial behavior among students (raising awareness and motivation); (2) Training students in the skills they need to set-up a business and manage its growth; (3) Developing the entrepreneurial ability to identify and exploit opportunities (Izvercianu and Draghici, 2008), (Tomatzky, 2002).

This paper presents some important aspects of entrepreneurship education processes developed by Politehnica University of Timisoara, the Faculty of Management in Production and Transportation (UPT-MPT). The aim of this approach is to increase the university implication and contribution to human resources development with impact upon the social and economic development of the West Region.

The paper presents the main opportunities offer by the a Leonardo da Vinci project call: ResEUr - Certified Research-Entrepreneur (developed with the support of the European Certification and Qualification Association - ECQA) for the entrepreneurship competencies development and their European certification in the case of the master students (second year of study or graduate students) from the Engineering and Management specialization, but also, for the young researchers (PhD. students) (Messnarz et.al., 2008).

Entrepreneurship Competencies Development – Case Study for UPT-MPT

The following aspects will be presented: the entrepreneurship competencies development – case study for UPT-MPT, Romania by considering two parts: (1) A brief description of the MBA master program competencies, and (2) The ResEUr complementary competencies as main opportunities for students (European Commision, 2008c), (ResEUr, 2009).

The UPT-MPT MBA Master Program Competencies

The MBA: Master in Business Administration program was established in 2002 with the support of the Faculty of Management in Production and Transportation teaching staff. The MBA was one of the important goals of the project financed by the Romanian Government through a CNFIS contract no. 164/2000, entitled "*Master in Management and Business Administration (MBA – Master in Business Administration - Executive)*" in collaboration with Tennessee University from USA. Subsequently, this project has been expanded for the development of a *Centre for Entrepreneurship*, an entrepreneurship training and consulting center that was connected to the platform of the *Virtual Center for Entrepreneurial Skills Assessment*, CE@ANPART portal, as an objective of the contract no. 91-069/14.12.2007, PNII, a Partnerships in priority areas project entitle: *Partnership for Excellence in Research for entrepreneurial skills and competitive human capital development in the knowledge and innovation based economy and society*.

The Centre for Entrepreneurship is a coherent framework for research and education dedicated to interdisciplinary education of specialists in Engineering and Management, and bidding integrated diagnostic solutions, training and consultancy for businesses (especially for SMEs). In 2009, the education processes quality evaluation and the qualification certification have been evaluated and recognized by the Romanian Agency for Quality Assurance in High Education (ARACIS). The main categories (last version) of competencies gained by the graduate master students together with the corresponding teaching subjects are shown in Figure 2.

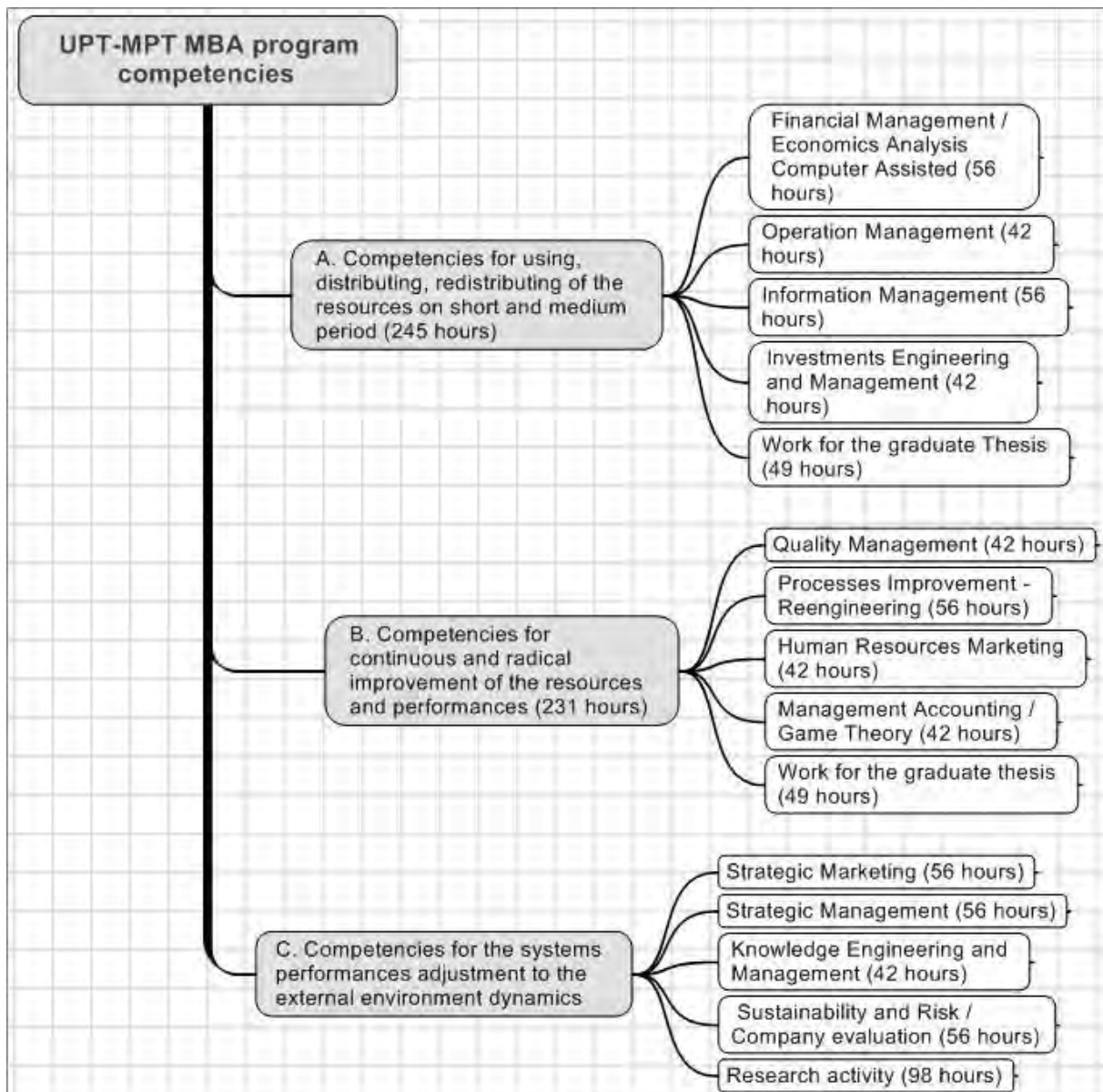


Fig.2. The Skill Set Map of the MBA UPT-MPT Program (786 hours)

The MBA program has a great success and each year the best graduate students from different UPT specialization are admitted to the courses. The MBA program receives ongoing cooperation in research with various companies/firms from Timiș area, as these companies employ the majority of students (even occupying management positions). As a result, research and dissertation projects have a deeply applicative character, resolving problems of companies in the Western Region.

The ResEUr Complementary Competencies

This approach was initiated since 2008 using the relation between UPT and ECQA, relationship that was developed through other projects. Also, according to the Bologna Process it is very important that training courses are internationally recognized, and that successful course attendees receive certificates that are valid for all European countries. The European Union supported the establishment of the European Qualification Network (EQN), from which the ECQA has evolved. This has resulted in

a pool of professions in which a high level of European comparability has been achieved by a Europe wide agreed syllabus and skills set, a European test questions pool and European exam systems, a common set of certificate levels and a common process to issue certificates. Quality criteria to accept new job roles in the ECQA, to accredit training organizations and certify trainers, as well as to certify attendees have been developed. The existing skills assessment portals are extended to cover the new requirements of the ISO 17024 (General Requirements for Bodies operating Certification of Persons) standard.

In this context, the motivation for the ResEUr project (Certified EU Research-Entrepreneur, a Leonardo da Vinci Multilateral project for the Development of Innovation, 503021-LLP-1-2009-1-BE-LEONARDO-LMP) lies in the lack of a European-wide valid set of training modules and certification of entrepreneurial skills of young academic people (ResEUr, 2009).

Europe is far from exploiting its potential of successful entrepreneurship in higher education, because it often fails to mobilize the right innovative resources and young energies. The project aims at delivering to innovative researchers entrepreneurs the qualification to determine if their work and/or their ideas have a market potential, as well as to be able to create a commercial interest for what they are doing. The results envisaged are a skill set which clearly describes the skills required for a researcher to turn his ideas into marketable products, and thus to be able to create and develop a sustainable enterprise. For all the skill elements, training material will be provided in several languages and in an e-learning environment. A pool of test questions will be defined, which provides the basis for the certification of students. All these elements will be verified with a number of students in the context of initial trainings and certifications.

As it can be seen in Figure 3, the skill card is represented by a map (using the Mind-Manager software) with the main branches consists of the skill units and the second branches that are the correspondent skill elements.

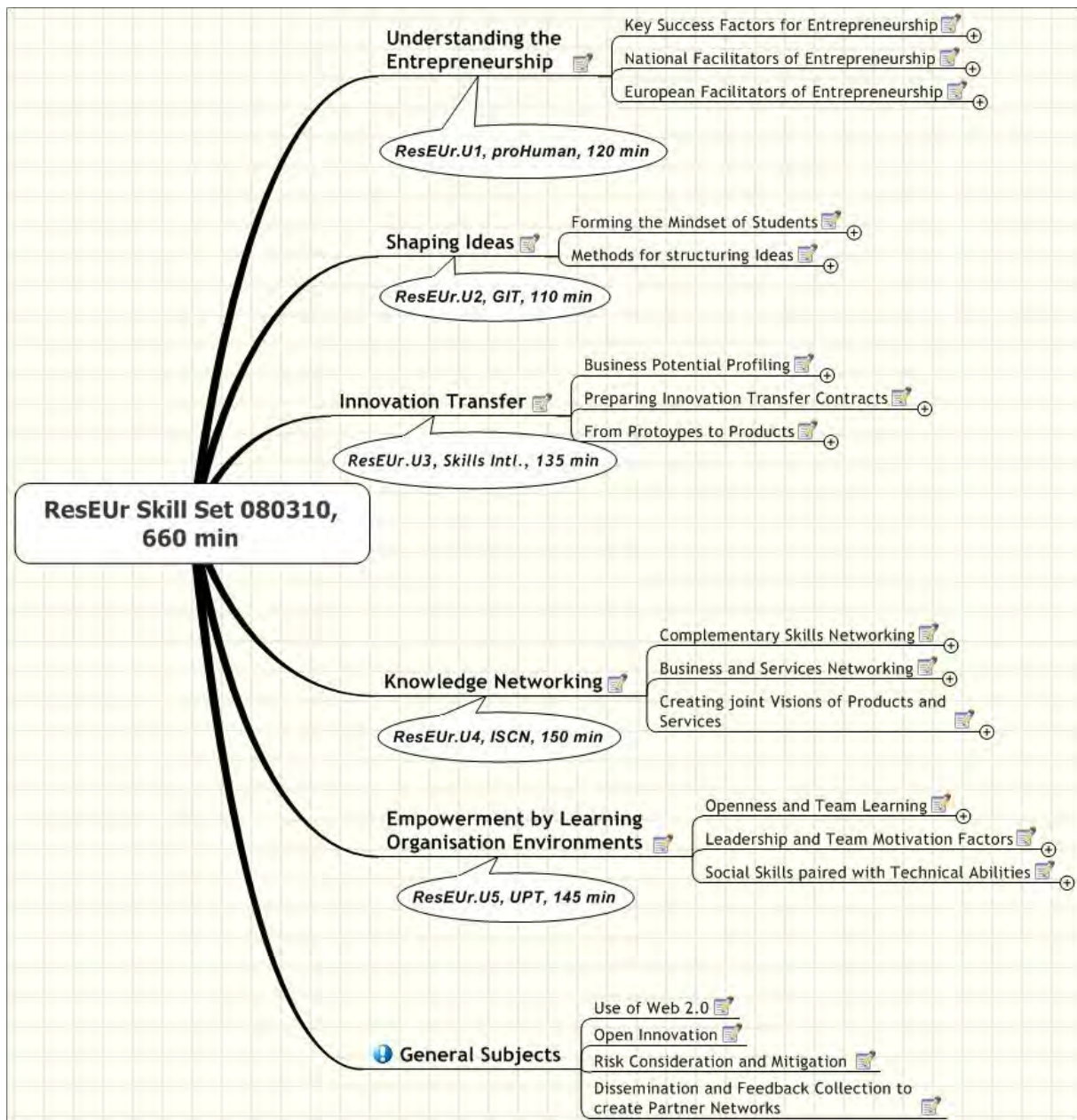


Fig.3. The ResEUr Skill Set Map and the Training Program

Each skill unit and element has a specific code, and the partner acronym that will develop the correspondent training material, and the estimated duration of the training. The third branches are allocated to the performance criteria of each element (that are in direct relation with the questions that shall be settled for the examination process related to the certification procedure). This representation of the skill card allowed an optimal visualization of the completely developed work (in different project stages) and the harmonization and integration of the partners for attending the project objectives. The skill set map was a good tool of communication between the partners and the IT specialists involved in the project, too.

Conclusions and Future Opportunities

The paper presents some important aspects regarding the entrepreneurship skills development (qualification) and certification and a possible, feasible solution for this problem at the European level. In the introduction have been underlined the importance and the need of the entrepreneurship training in Europe, using relevant references.

In the second chapter, there have been described the existing and successful MBA master program existed at UPT-MPT, in terms of the competencies that are trained. Also, there have been presented the ResEUr skill card (skill units and elements), the training program and the certification procedures developments. This master program will be connected/extend with the ResEUr training program (by introducing the ResEUr training modules in some syllabus) and so, some students will gain an European certification.

The described approach is a classical one for skill set provision (qualification - certification) on the ECQA platform (www.ecqa.org).

The presented ResEUr structure and the content of the training program is the result of many virtual meetings and project meetings of the specialists involved in the project. The certification procedure allows total and partial certificates. The defined skill set map is complementary to the master programs in the field of engineering and management that exist at UPT-MPT (MBA and Competitiveness Engineering and Management).

The *main opportunities* from the European certification of the research - entrepreneur profession/competencies in the case of Romania are:

(1) It offers the possibility for having a EU certificate (total or partial) for the students that follow the training program and pass the examination process successfully (more than 70 percents of the answers are correct) together with the master diploma. This certificate offers them complementary competencies that are compatible on the EU labor market (e.g. students can start their own business or can act as entrepreneurs in different field inside companies, in multinational companies in Romania or in other companies in Europe). This opportunity can be attractive for PhD. students and young researchers, too;

(2) The qualification and certification can be used by other people that want to update and develop their knowledge in the entrepreneurship field for better align themselves to the new trends (new processes and requirements of the market);

(3) The different skill units of the training program can be introduced in some master program courses (in their syllabus) and so, students can be easy trained for being certified. Professors from academia can become ECQA trainers for ResEUr;

(4) The Romanian master programs in the field of engineering and management can obtain an European dimension and they can be more attractive for the potential students;

(5) Universities or other training bodies can become collaborators of the ECQA and they can benefit from the established schema and experience gained.

The presented paper is linked with the research activities of the project: Certified EU Researcher – Entrepreneur (contract no. 503021-LLP-1-2009-1-BE-LEONARDO-LMP), founded with support from the European Commission. The presentation of this paper is connected with the dEUcert project - Dissemination of European Certification Schema ECQA (contract no. 505101-LLP-1-2009-1-AT-KA4-KA4MP), that has been funded with support from the European Commission, also. This paper and communication reflects the views only of the author, and the Commission cannot be held responsible for any use, which may be made of the information contained therein.

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Innovative Tools and Models for Vocational Education and Training

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Abstract

Purpose – Is to show how to renovate the teaching infrastructure used by specialists in e-learning, improve education quality and making it more adaptable to the Romanian labour market.

Methodology/approach - Renovating the teaching infrastructure used by specialists in vocational education, and improve vocational training quality by providing more flexible trainings paths to the Romanian labour market by inclusion of e-learning methodologies.

Findings - Modernize the Information and Communication Technology (ICT) infrastructure at “Petru Maior” University of Târgu-Mureş (PMU), install modern technical ICT and video equipment at 3 regional sites. Development of a hybrid educational model which comprises synchronous activities.

Research limitations/implications - Nowadays there are very few hybrid educational models in the educational domain which should combine the asynchronous learning with the synchronous one. The research problem is to develop new teaching infrastructure and to improve education quality in e-learning, using new models.

Practical implications - Dissemination of the model for organizing and delivering e-learning, comprising of competence transfer, competence export, network building, and universities association development.

Originality/value - The paper presents the improvement of the quality of learning process, the promotion of the access to new and innovative methods and educational resources and the large implications of ICT.

Key words: vocational education, e-learning, regional study and competence centres.

Introduction

The new information and communication technologies have an important impact on the society, obviously modifying it. In the field of education major changes are necessary and foreseeable, especially for adults, thus the new educational and consultancy technologies are synonymous with information society (Parzinger, 1998).

According to a study carried out in the USA, at the end of the year 1995, about 76% of the American universities were offering forms of long-distance learning, and at the end of 1998 this percentage increased to 90. In most of the EU countries there are visible efforts to develop and implement systems of long-distance learning. The UE countries have been making efforts to develop and implement the distance learning systems; it is estimated a 10 years fallback behind the United States of these countries.

The scientific, technologic and economic evolution lays its mark at all educational levels, being necessary new technologies of learning. People interested in the educational system must have permanent access to the scientific and technological information provided by institutional interconnection (universities, companies, administration) in an information network said Zhang, (2003). Long-distance learning represents a modern way of learning, characterized by high flexibility, meant to provide the students with superior accessibility and applicability of the traditional learning methods used in the educational institutions mentioned Farazmand, (2005). The new form of computer based knowledge involves a different approach to didactics, through the learning object practice, and, in particular, a careful reflection on technological equipment intended to: 1) assure accessibility to every user, 2) grant for the fruition

of a useful product to all recipients, 3) assure a perfect integration between the knowledge content and the different devices employed (Penna, 2006).

Nowadays there are very few hybrid educational models in the educational domain which should combine the asynchronous learning with the synchronous one. The software products destined to distance learning are learning media in asynchronous format, such as: Lotus Learning Space, WEB CT Blackboard, Screen Watch, Web Tycho and they allow instruction in a cold, unfriendly environment.

The objective of the work presented in this paper is to develop new teaching infrastructure and to improve education quality in e-learning, using new models.

Background

“Petru Maior” University of Targu-Mureş (PMU) is the main development centre for human resources and higher education in the Mures region. Since 2000, within the university operates the Long-Distance and Low-Frequency Learning Department.

In the area of Internet and telecommunications, PMU is among the first five major Internet Service Providers in the Romanian academic world (RoEduNet). This provides the necessary infrastructure for Advanced Educational Technologies in Education.

Concerning the updating of technical education, the use of new technologies, based on multimedia and modern communications techniques is of most importance for PMU.

“Petru Maior” University gives very much attention to the improvement of the quality of learning process, to promote access to new and innovative methods and educational resources and the large implications of Information and Communication Technology (ICT) in education.

The creation of a special department for Open and Distance Learning in the university was the first step in offering to this type of education the place that it deserves in our future development plans. During the last academic year, the ODL department knew a very important development, seven new specializations have been created and almost 1800 students are enrolled.

As distance learning technology, for the beginning, the product Lotus Learning Space was acquired by PMU. After a few years of using this technology, we may conclude that the development of the courses in this format is impersonal and unfriendly, and the opposite would be one more sympathetic and attractive for the learners through humanizing the learning network.

The very successful EU-supported Leonardo da Vinci pilot project MECCA (<http://prosjekt.hist.no/mecca>) utilized state of the art technological ICT- and video solutions to simplify and improve the access to e-learning. It developed brand new pedagogical methods that enhanced the attractiveness and participation in e-learning and education. This included development, testing and validation of new, state of the

art vocational training methods in industry. It has been promoted by Sør-Trøndelag University College of Trondheim.

The Move-It Project

Two partner universities: “Petru Maior” of Targu-Mures in Romania and Sør-Trøndelag University College of Trondheim in Norway had an initiative to renovate the teaching infrastructure used in e-learning, and improve teaching quality, making it more adaptable to the Romanian labour market by arranging a new distance learning program in Central and Western parts of Romania (Moldovan, 2009).

This initiative is developed in the project „Innovative Tools and Models for Vocational Education and Training in Central and Western Romania” (MoVE-IT), financed by EEA mechanism.

The initiative includes dissemination of the model [Stav, et al, 2006] for organizing and delivering e-learning, comprising of competence transfer, competence export, network building, and schools association development within a regional development perspective. The training delivery utilizes state of the art ICT solutions and video services, to improve vocational training services and solutions.

Outcome and results of the MoVE-IT project are:

- Modernize the existing ICT infrastructure at PMU by developing 2 state of the art computer technology laboratories, 1 digital classroom, 1 video laboratory and instalment of necessary ICT servers;
- Install modern technical ICT and video equipment at 3 regional vocational schools that will act as regional study - and competence centres. These are: “Agora” University of Oradea, “1 Decembrie 1918” University of Alba-Iulia, “Mircea Eliade” National College of Sighișoara. The equipment may be used by their regular day students, local vocational training of staff in industrial companies, and transfer and/or export of training within the network consisting of PMU, the vocational schools and industry;
- Deliver instructor training targeting use of technology and new pedagogical methods;
- Enhance training delivery through regional seminars at the vocational schools;
- Deliver vocational training at each of the 2-3 vocational schools sites;
- Develop a “good circle” for tailor made training programmes providing vivid and cost-efficient distribution of income and expenditure between the teachers, the regional schools, and PMU;
- Improve and simplify administration of training activities by extending existing Learning Management Solutions for effective deliverance of educational material from teachers to students.

The impact consists in technical solutions that are adapted to available bandwidth, and establishment of training solutions that are accommodated to the telecommunication costs. The training solutions identify good practises that underpin the capacity for innovation, as well as expansion of capacity, in e-learning (Stav, 2007a). Also other participating training organisations and industrial companies may utilize the new training environment to offer and receive a broad range of specialized courses.

Innovative Tools and Models

We have developed a hybrid educational model which comprises asynchronous in proportion of 80% and synchronous in a proportion of 20%. Most of the distance learning technologies, even at world level, are based on asynchronous activities. This educational model presents some major drawbacks, such as: the expression value of the instruction model is low; the module structure is deficient, most of the instruction being performed in a cold, inexpressive, impersonal way. Another disadvantage of the materials designed for asynchronous training is their format, which consists of PowerPoint slideshows or text in html format, which are hard to read in electronic format.

In a general assertion, the essence of long distance learning consists of the lack of fixed meeting time between the instructor and students; all the teaching / learning work being performed asynchronously, via Internet.

Teachers and learners can discuss with each other in a social way by combination virtualization and reality as reported by Li et al, (2007).

The e-learning tool allots a certain amount of time of the teaching time to asynchronous activities, while other amounts of time are dedicated to synchronous activities. The ratio between the two forms of instruction depends on the volume of structured material and the target group to which the material is addressed. Certain materials require a proportion of 0 /100 %; others: 90 / 10% or somewhere between these extremes. It is important that the proportion between the two forms of instruction should be explicitly determined by the mentioned factors and not randomly.

The principles exposed are transposed into a software product which offers solutions of active, adaptive and contextualized learning. The information is organized into 5 database (virtual classrooms) structured as follows:

- *SCHEDULE*- functions as the time-planning curriculum by presenting the titles of the volumes from the course contents, their organization by the calendar.
- *MULTIMEDIA* – stores the useful information from the course and sends it to other articles from the module (texts, static and dynamic images, sounds etc).
- *SYNCHRONOUS COMMUNICATION* – is used by instructors to interact directly with the students.
- *PROFILE* – is used to find information on the students and to display the evaluation results in an individual portfolio.
- *EVALUATION* – is used exclusively by the instructor, to evaluate knowledge.

One prototype of collaborative virtual geographic education environment has been developed using Java and Java 3D, provides one immersive 3-dimensional environment and many virtual teaching methods including virtual geographic environment, virtual geographic process.

The open architecture and object-oriented design technology is used, to integrate the applications destined to quality management with the computer business surveillance systems.

For long-distance learning in hybrid format and the implementation of the learning network elements of neuronal calculation are used. The building of the neuronal net-

work for this aspect is achieved in two main stages: a) learning (training), through a process of changing the synaptic as answer to the entrance vector presented at the entrance layer of the neuronal network to build up the neuronal network for the desired activity; b) generalization – after the neuronal network has been studied on the basis of sufficient examples, it will be able to induce a complete relation of interpolation or extrapolation of the examples studies. The generalization represents an answering stage of the neuronal network, when presenting new entrance vectors or from the training bulk, the exit vector will be the one expected, with a very small possible error. The quality of the answers in the generalization stage represents the target of the learning stage.

The Development of the Instruction Network

The development of the instruction network implies the explanation of tasks and roles assigned to the online instructors, the accomplishment of a guideline to be used in the instruction process, which should treat the following four functions:

- The pedagogical function – accomplished through the instruction provided.
- The social function – accomplished through the formation of a community and of a friendly social environment, essential for the online preparation.
- The managerial function – accomplished through the institution of regulations on the course agenda, of the objectives, the establishment of rules, decision making; in other words, course administration.
- The technical function which consists of the instructors proficiency of didactical technology, so as he / she should use it easily, and consequently send it to the students.

It is developed a teaching network which explains the tasks and roles for each online instructor, and deals with four functionalities: pedagogical, social, managerial and technical. In figure 1 it can be seen the framework of the learning network through specific applications.

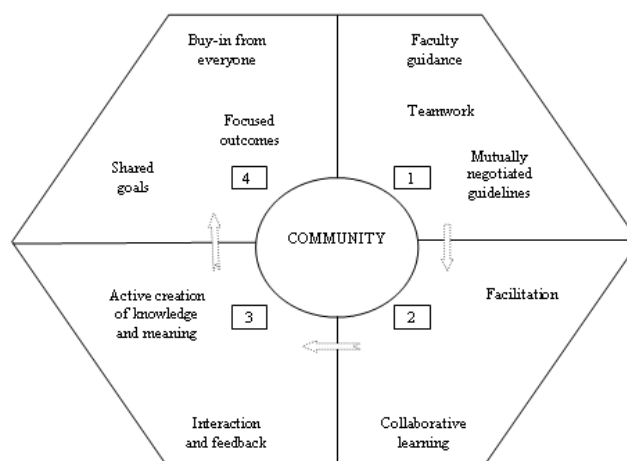


Fig. 1. A learning network

The suggested solutions are realistic from a conceptual point of view and allow the accomplishment of a complex software product, which encompasses three distinctive instruments, whose aim is to long – distance instruction in hybrid format, and provide

instruction by using specific applications – through integration in the developed solution of the IBM Lotus Notes/Domino software package (document and web content management, training programs management, efficiency with instant messaging, presence awareness, Web conferencing and team spaces).

The model developed within the project achieves a learning process that combines data and interaction (Stav, et al, 2007b). The information can be presented under multiple forms, which comprise readings or individual research, while interaction is achieved by three means: student - instructor, student - student and student – studied material. In order to plan the activities a matrix for the allocation of functions is used.

The student-instructor interaction can be done in various ways: chat sessions, teleconferencing, audio file transfers etc.

Educational Content

Starting from the fundamental concepts of the learning process, it is developed an Interactive Cycle of Distance Learning, which indicates the elements that indicate the elements that are taken into account for the development of each learning session, regardless of its length.

The four dimensions of the learning style are: concrete experience – offers the student a psychological and emotional involvement, creating the necessary emulation for efficient learning; reflexive observance – allows the student the possibility to reflect upon his/her experience and to share it with other fellow students; abstract conceptualization – it refers to data from documentation sources that contain theories or principles; active experimentation – allows the student to apply the methods in real-life situations.

The learning cycle starts with an activity of humanization, together with getting the students attention, stating objectives and stimulating memorizing of important data. Concrete experience allows the student to easier understand the principle presented. Reflexive observance– facilitates discussing the real experience with fellow students through student-student interaction. Students receive the information and send out a reaction. Active experimentation allows them to apply the principles to a new real case. Finally the learning method, the performance of the student are evaluated and the level achieved becomes the basis for a new module.

Humanization creates an environment that turns the students into a community of thought and efficient action. Participation has as effect active learning. Sending of messages consists of transmitting information towards students, and Inverse reaction consists in testing the level of correct understanding of the messages. The evaluation phase tests whether the learning method functions and it is applied correctly.

In the pilot testing phase, the educational content is developed specific for Total Quality Management (TQM) according to a tri-dimensional matrix: the applied managerial TQM component, the technologic component of the systems of quality, informational-decisional component. *The managerial component* with themes refer-

ring to: General Management (The management of production); Total Quality Management (TQM); Managerial Instruments and Techniques; Audit; Designing Systems of Quality; Applied Marketing and Financial Management. *The technologic component*, with themes referring to: optimizing processes through quality criteria; technological restructuring, non-conventional technologies; transfer of technology and reengineering. *The informational component*, with applications referring to: bases, data banks at the level of firms; informational systems for quality costs; programme products for: operational managerial activities, secretarial activities – administration, statistic control, laboratorial and model testing.

Regarding educational content, a course of study that counts as vocational education in one country may be a part of higher education in another, and it may be entirely absent in a third country because the professional domains and hierarchies are organised differently (Grollmann, et al, 2009).

Discussion and conclusions

PMU has developed a new teaching infrastructure for e-learning, and has improved teaching quality, by arranging a new distance learning program in Central and Western parts of Romania. This development is supported by the MoVE-IT project, which is financed with 1,2 mil euros by EEA financial mechanism. It has practical implications for academics from PMU and partner organizations due to the promotion of the access to new and innovative methods and educational resources, but also the large implications of ICT.

The new hybrid educational model is developed for organizing and delivering e-learning, comprises asynchronous and synchronous activities and an interactive cycle of distance learning.

The educational model is important for academics in general due to the quality improvement of the learning process.

The contribution consists in development of the MoVE-IT project, organising a distance educational network in Central and Western parts of Romania and elaboration of an educational model for distance learning.

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The Influence of the United Europe on the Romanian Public Administration

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Abstract

Purpose – Romania, as an United Europe member, has completed a course in European politics and requires a thorough on-site on our role in Europe, so that from this base, the Romanian nation, by its elites, they can design with more efficiency their interest in the Union.

Methodology/approach – The ongoing crisis has revealed the importance of EU institutions to strengthen the cooperation and the solidarity between the 27 Member States, as the solution to the economic recovery.

Findings – The starting point of this analyze is given by the population's ratio in the overall UE. Romania is the 7-th country in UE27 with more than 20 million inhabitants.

Research limitations/implications – The analyze of our country's influence in the European Union can be only as the result of research, that involves time and implication.

Practical implications – The research combines qualitative and sociological implication and also historical and institutional ones.

Originality/value – Therefore, the analyze will be focused on the way Romania influenced the European institutions (Council, Parliament, Commissions).

Key words: United Europe, public institutions.

Introduction

The second half of the year 2009 was crucial for the medium-term future of the European Union since the election of the new European Parliament was followed by the formation of a new Committee and the result was the Lisbon Treaty which came into operation, thus bringing important changes into the institutional architecture. After the completion of the ratification of the Lisbon Treaty, each European citizens' life's will be hardly influenced by the policies developed by the Community's institutions.

The ongoing economic crisis has revealed the importance of the UE institutions in order to enforce the cooperation and the solidarity of the 27 Member States, as a solution to the economic recovery. Romania, as an EU member, has completed a course in the European politics and requires a thorough in-site on its role in Europe, so that from this base, the Romanian nation, by its elites, can design major interest in the United Europe.

The influence of the adhesion of Romania

The term "influence" has several meanings, depending on the related subject. The general definition means "the ability or power to act or to make effects on the purpose of action, behavior, opinion etc, on others". The influence of Romania in the European Union must take into account that our country is a full member, having the obligation of solidarity with the other Member States.

In this respect, the EU negotiations is usually positive. However, there are other 26 states, having different sizes, different cultural traditions, competitive economies; the institutional triangle Council – Parliament – Committee represents the place where not only the states' interests are in competition, but there is an ongoing competition between the logical representation of the states and the citizens interests, which causes institutional rivalry, in profound sense, and the influence is due not only to the demographic factor, the economic or military power, but is a consequence of a attractiveness of a cultural/civilizational model built in centuries, in order to achieve an ob-

jective within the European Union. The Member States should have influence mechanisms both horizontally (between Members) and vertically (between the state and the Community institutions). In order to achieve important strategic goals, one Member State of the European Union must have the resources for joint negotiations, both horizontally and vertically.

According to this perspective, the analyze of Romanian's influence in the European Union can only be the result of research, in which quantitative research is combined with the qualitative one, along with the sociological, historical and institutional perspectives. Such study, used by the decisional factors in Romania, involves time and financial resources.

The starting point of the Romanian influence on the EU institutions is given by its ratio in the overall EU population. Romania is the 7-th country in the United Europe with 21.5 million inhabitants, which provides the following rights, according to the Nisa Treaty and the regulations:

- 14 votes in the EU Council, from total 345. Thus, Romania ranks 7-th, after Germany, Great Britain, France, Italy, Spain and Poland
- 1 European Commissioner
- 33 Parliament Members
- 1 judge at the Court of Justice
- 1 judge at the Court of First Instance
- 1 member in the Accounts Court
- 15 members in the Economic and Social Committee, meaning 5 trade union representatives, 5 representatives of the employers' confederations and 5 members of the civil society
- 15 members in the Regions Committee
- the Romanian National Bank is part of the European System of the Central Banks and its governor participates as a full member of the General Council of the European Central Bank and its committees
- the Romanian citizens have the right to work in EU institutions
- the European Commission has proposed the hiring of 1058 new officials by 2011, of which 698 Romanian and 360 Bulgarian

Table 1 Romania's contribution and subsidies offered to / from EU

	2007		2008		2009		2010	
	Sum	% of PIB	Sum	% of PIB	Sum	% of PIB	Sum	% of PIB
1.Total external grants	1085,3	1,00	1701,3	1,40	2470,3	1,84	3211,2	2,19
2.Total national co-finance	573,7	0,53	0,53	0,54	605,1	0,45	685,5	0,47
3.Romanian contribution to the UE budget	573,7	0,53	0,53	0,54	605,1	0,45	685,5	0,47
Sold [1-(2+3)]	-615,0	-0,57	-102,1	-0,09	+734,8	+0,5	+1280	+0,8

A second essential issue for evaluating the influence of Romania in the European Union is the ratio between the contribution to the EU budget and the grants offered by the union.

The analysis of the comparative data on the total non-reimbursable European funds for Romania during 2007-2010, along with our country's contribution to the EU budget presented in the table above shows that only in 2007 and 2008 Romania has, by the quality of a net contributor, a negative balance between all EU funds allocated for our country and its contribution to EU budget, that is 0.57% of PIB, reduced to 0.08% of PIB in 2008. Thus, from a negative balance of 615 million Euro in 2007, the European funds will exceed. Of course, the absorption of EU funds depends crucially on the capacity of the national government and the companies to achieve projects in Romania and ensure their financing, but bureaucratic requirements imposed by the European Commission acts as a brake. However, along with other states, Romania would have to act at political levels for more flexible procedures in accessing funds. Easing the bureaucratic and administrative requirements was accepted at European level in the context of economic crisis.

Romanian's post-adherence strategies

The transition from candidate to a state member of the United Europe, with full rights, represented a major challenge for the political elite in Romania. Until adhesion, Romania's main objectives were established by the cooperation between Bucharest and Brussels. After January 2007, Romania is facing its achieved goal, the adhesion, and is creating the project for the second stage of integration. For fulfilling this task, Romania needed to settle its own objectives within EU, based on specific interests, meaning the resources to be mobilized.

The Community institutions of the United Europe are:

- The Council

The European Union is an original design where the - governmental methods are combined with those arising from the theory of federalism. Most important decisions are taken within the EU members. The European Council is the highest expression of this formula.

Regular or special meeting of the Heads of State Governments of the members must be carried out by the Commission and this determines the European Parliament agenda. Practically, a state has the greatest opportunity to influence EU decisions quickly and to shorten the bureaucratic mechanism of the European Commission. In the European Council the most important issue is the personality of a Member State representative and the appreciation among the other members. A significant example to illustrate this observation is that of Jean-Claude Juncker, Luxembourg's former prime minister who governed a small state, but his influence in the European politics was much more than that expected from a small state like Luxembourg.

The Council currently has 9 configurations. Romania has 14 votes from 345, which can be used in different ways, depending on the decisions: by simple majority, by qualified majority or by consensus. Fully expression of inter-governmental is the adoption of resolutions by consensus or unanimously. This means that each Member State has a veto and, thus, the ability to block any decision. The main critic of this system is that the veto can block a decision but cannot make progress in solving the problem. Moreover, the veto only ensures the equity of the Member States, apparently giving them the proce-

dural equal powers to persons that aren't equal in substance (politically and economically).

Therefore, countries with less political weight cannot use the veto but rarely, otherwise exposing it to political retaliation from countries with greater political weight. That means that the Council, like other Community institutions, is essential in the negotiation capacity, the ability to build long-term alliances, rather than the number of votes given by the empirical application of the population number principle.

In times free of conflicts, when the growth has been achieved, the issue concerning the Romanian level of influence was analyzed only by a few number of specialists. Now, in conditions of crisis, this is a key element for Romanian's national interest. The economic crisis has revealed a sad truth: even if our country is both an European Union and a NATO member, it became an isolated state that remained without partners in difficult times. Romania was guided to ask for financial support from the IMF, like Hungary and Latvia, but the European Council refused the proposal of setting up an 190 billion Euro fund to the Member States from Eastern Europe.

- The Parliament

The MEP institution is a political space in which the influence over the decisions is the result of a combined exercise of individual political skills and the use of support from political groups. With 35 MEPs out of 785, Romania cannot aspire to significant influence in the European political process, other than by using the resources given by the three major political groups: popular, socialist and liberal.

Moreover, the EU Parliament is not represented by the states, but by citizens, so negotiations are carried out between political groups, nor between the national delegations of the 27 Member States. The principle is the dominant ideology, that transcends ethnicity. EU encourages all forms of competition except the national one. Therefore, the EP doesn't exist and there can be no "group of Romanian MEPs", but only a delegation of Romanian MEPs. Accordingly, the activity based on national issues has no institutional framework for expression and it's not reflected in documents or statistics.

In the Parliament there is no majority and opposition. Therefore, for promoting the legislation or ideology of the political groups, there are permanent negotiations. They inevitably lead to compromise formulas. While political negotiations between business groups are very important, they are not public and not recorded on official documents.

The influence of the Romanian MEPs on the European policy can be an exercise with many pitfalls, as there is no direct relationship between the parliamentary activity and influence. Exercising influence is a complex mechanism, in which the less visible elements of promoting the groups must be supported.

- The Commission

Since 2006, the main opportunity for Romania, regarding the acquisition of significant influence in the European politics was the proposal for a strong candidate for commissioner. The Commissioner's role, besides the "treaties` guardian" is very important because about 60% of the applicable law for the Member States is taken at EU level and the Commission still holds the monopoly in the legislative initiative; the funds managed by the Commission are very high, exceeding almost twice the Romanian budget.

An European commissioner is not representative in the country that proposed him, but a high executive who serves as an independent member of the Federal Government. However, in practice, the Commissioner is an important pillar for an UE country.

Conclusions

Romanian's role in the United Europe is a complex subject which should be judged in terms of Romanian values and European standards. In order to highlight the impact of Romania's integration, I'll present some advantages:

- economic: growth, improved living standards
- political: stability, security

The integration will have positive effects on the modernization of the Romanian society, the image of our country and the lives of the citizens. The economic benefits are: economic growth, increased foreign direct investments, new production structures, greater consumer protection. As far as the political aspects are concerned, the citizens will be better protected against the possible attacks from the possible enemies.

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HRD Audit: A Comparative Study of State Universities in Jammu and Kashmir, India

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Abstract

Organizations, in the present environment, can survive and succeed only if they wisely manage the assets i.e. capital, technology, and people, within their control. Traditionally, organizations focus heavily on their capital and technology, neglecting both the fraction of resources that should be devoted to people and the impact people processes have on the success of the organizations. To maintain a competitive advantage, the organizations need to shift their focus from asset intensive to knowledge intensive and thus focus more on their human assets than on technology assets. HRD Audit works as a system for measuring the HR framework in the organization and helps in attaining sustainable competitive advantage. The audit helps in channelizing the energies, abilities and specific knowledge of the human resources towards attaining long term organizational goals.

In today's knowledge based economy, higher education institutions are playing as centers for human resource development. (King, R.1995). Also, universities currently face immeasurable complexities and turbulence in their external environments and their internal set ups are consequently under the pressure to adapt in an effective way. (Brock, D. M.,1997). On the one hand, universities are increasingly being required to teach ever increasing number of students in increasing numbers of specializations and disciplines and on the other they are being asked to pay more attention to quality of teaching and educational programs. (Uma Shanker, Dutta, 2007)

To be able to cater to the challenge of expansion and diversification, while ensuring that the quality standards are maintained, human resource development systems can prove extremely critical towards this purpose for the higher educational sector. The present research study is proposed in this backdrop, with a view to introspect the role of Human Resource Development systems in the larger context of higher education sector in India The University of Jammu, Jammu and the University of Kashmir, Srinagar from India, have been taken for this study. The study is based on the assumption that Human Resource Development Audit is significantly a function of Human Resource Development Climate in organizational context. (Pareek, U., Rao, T. V.,92, Rohmetra,98)

The state of Human Resource Development Systems can be easily evaluated by using the HRD Score Card, which would assess the HRD maturity level of the organizations under study. The scorecard would assign rating to four critical dimensions of Human Resource development contributing to the organizational performance, viz., HRD System Maturity, HRD competencies in the organization, HRD Culture and HRD linkage to organizational goals. (Rao, T. V., 99). The data will be collected by administering different sets of questionnaires on these four dimensions. Finally, the scores would be determined to assess the level of HRD maturity in the Universities under study. The study also seeks to bring out a comparative analysis of the HRD Systems, as it exists in the two Universities in the State of Jammu and Kashmir in India.

The analysis of the data collected shows that there is an inadequate Human Resource Development Climate at the Universities and subsequently a low degree of employees' satisfaction. The research paper suggests measures for developing HRD climate in the universities under study, which would help to plan , set targets and take strategic initiatives to face the challenge..

Key words: *Human Resource Development, HRD systems, HRD audit ,HRD System Maturity, HRD Competencies, HRD Culture, HRD climate, higher education sector*

Backdrop

The revolutionary transformation which the organizations are facing today, has intensified due to Information Technology. The knowledge based economy prompts the organizations to develop customer relationships that can survive in the present turbulent and competitive environment. This is possible by innovations and production of customized high quality products and services at low cost. This is how information age has brought forward the importance of the internal customer, i.e., the employee. Sustainable competitive advantage in this present world can be attained by mobilizing the employees' skills and channelizing their attitudes for continuous improvements in process capabilities, quality and response time. (Kaplan & Norton,2004).

Information age companies can attain effectiveness by investing in and managing their intellectual assets. Employee competency would not only lead to increase in organization's revenue but also lead to customers' loyalty, cost reductions and quality improvements. It is well researched that when the human resource function improves in an organization, it delivers better results, both in terms of financial assets and employee as well as customer loyalty.

The effectiveness of human resource function thus becomes important, especially in case of higher education sector, which in turn, forms the basis for the human resource development of the society at large. Human resource development audit helps in measuring the effectiveness of the human resource function, which is essential for self renewal. A good HRD Audit would lead to enhanced utilization of talent and professionalization of the HR Department (Rao, 1999). HRD Audit helps in identifying the competency gaps and also suggests the areas that need improvements in terms of HRD Systems, HRD Climate, top management styles, HRD Culture, attitude and competency of the officers and staff. The need for HRD Audit becomes more intensified in the service organizations, especially in the Higher Education Sector. This sector holds a special place in the knowledge based economy, where the further development of the human resources is based on this sector. HRD Audit in the university would lead to improving the efficiency of the service delivery mechanism of the higher education sector, which would help in the overall development of the society.

According to Peter Drucker (1999) "The most valuable asset of a 20th century company was its production equipment. The most valuable asset of 21st century institution will be its knowledge workers and their productivity.

Ostroff (1995) developed an overall HR Quality Index based on the aggregate ratings of all HR activities of a firm. Pfeffer (1998) has reviewed considerable evidence on the effectiveness of good HR practices on organizational performance. Rao (1999) suggest a model of linkages between HRD Instruments, processes, outcomes and organizational effectiveness.

Kaplan and Norton (2004) created the Balanced Score Card and have identified three different sets of intangible assets essential to implement strategy. These are:

- Human Capital: The skills, talent and know how of the organization's employees or strategic constituencies;

- Information Capital: The information systems, networks, networks and technology infrastructure of the organization or strategic technologies;
- Organizational Capital: The ability of the organization to mobilize and sustain the process of change required to execute the strategy. The organization's culture, its leadership, how aligned its people are with its strategic goals and employees' ability to share knowledge and create the climate for action.

The Balanced Score Card requires the use of sets of measure to evaluate how well the organization is doing with each of its objective. In other words, an organization's strategy depends on how its people, technology and organizational climate combine to achieve its goals and objectives. This suggests the importance of integrative framework. The integrative framework offered by Yeung and Berman (1997) identifies three paths through which HR practices can contribute to business performance: (1) by building organizational capabilities; (2) by improving employee satisfaction; and (3) by shaping customer and shareholder satisfaction. Yeung and Berman (1997) and Rohmetra (2004-05) argued for dynamic changes in HR measures to refocus the priorities and resources of the HR function. They argued that HR measures should be business-driven rather than HR-driven; impact-driven rather than activity-driven; forward looking and innovative rather than backward looking; and instead of focusing on individual HR practices should focus on the entire HR system, taking into account synergies existing among all HR practices. This concept led to the concept of audit. The objective of a functional audit is to diagnose, analyze, control, and advise within the boundaries of each functional area of the company. The HR audit is a type of functional audit. Its objective is not only the control and quantifying of results, but also the adoption of a wider perspective that will aid in defining future lines of action in the HRM. Thus, HR auditing must perform two basic functions [Cantera, 1995]. First, it must be a management information system whose feedback provides information about the situation in order to facilitate the development of managing processes or the development of HR. On the other hand, it must be a way of controlling and evaluating the policies that are being applied, as well as the established processes. It can be understood that in order to secure the operative efficiency and user or client satisfaction, an appraisal of the results of the HR function is necessary. According to this approach, the results obtained can be valued from certain HR policies (an external type of measurement), or from the results of the policies or the policies themselves. The results can be valued through their cost (a measurement internal to the function) [Walker, 1998].

This would lead the organization to consider some basic questions. Are adequate HR policies being developed? Are the desired results being obtained? To what extent do they add value to the organization?

HR Auditing: Approaches

In searching for adequate measurements, the use of financial references to evaluate the costs and benefits of HR programs has become commonplace [Parsons, 1997]. Financial analysis models applied to HR development programs are increasingly being seen in the literature [Head, 1995; Swanson and Gradous, 1998; Mosier, 1990] and in cases that document their use [Prifrel, 1985; Jacobs et al., 1992; Sleezer et al., 1992].

Grossman [2000] proposes a three-pronged approach for the measurement of the HR function. First, according to this model, there should be efficiency measurements that help to determine the way in which the resources are being used. Within this group are the measurements of turnover, quits, and discharges as a percentage of total employees, average tenure of employees in various jobs, absenteeism, employee productivity, and intellectual capital. After calculating the measurements of efficiency, they must be compared to the results obtained in previous periods. Nevertheless, this is not sufficient, and it is critical to benchmark against others in the same industry or profession. When inefficiencies are revealed, careful analysis of the problem should follow before expenditures are slashed. These cover the efficiency side, but one must also look at the value-creation side. Thus, it is necessary to develop a new set of strategic measurements that connect directly with the mission and strategies of the company. The creation and selection of these ratios is more difficult, given that they depend greatly on the specific organization of which one is talking about. Fitz-enz [1999] proposes a measurement that includes quality, efficiency, and service. He suggests using a ratio constructed around the factors that can be applied to anything that one chooses to measure. These factors are cost, completion time, quantity, quality, and the human reaction. This system concludes with the calculation of measurements of the HR activities, which try to demonstrate their financial viability. These measurements are based on the idea of the ROI ratio, which is calculated by dividing the monetary value of a HR program by its costs. For this, the cost of the program that is being measured must first be determined, then it must be translated into monetary terms.

Nevado [1998] considers the strategical audit that should also analyze if the personnel policies are in alignment with the general objectives and the global strategy of the company. It must also translate the HR strategy into plans and programs (Dolan, Schuler, and Valle ,1999)

The HRD frameworks as proposed by these social scientists are conceptually heavy and culturally not very sensitive to the Indian management culture. The use of such strategic frameworks in Indian context, would not be useful. Pareek and Rao (1992) take into consideration HRD Systems maturity, HRD competencies of the employees, HRD Culture, Business Linkage of HRD. This card helps to explain which systems are good, which competencies are good or weak(HR Staff, etc.) , what impact is missing. The Scorecard helps to focus on Human Capital function and its impact in the context of organization's current and future goals. The HRD Audit Score Card as proposed by Pareek and Rao (1992), is comprehensive and provides a systematic and scientific way of measuring the maturity level of HRD, its systems and strategies, competencies, culture, values and impact on business.

The HRD Audit essentially should cover the following steps:

- 1) Define desired HR practices required for the organization
- 2) Assess current HR practices against the established standards
- 3) Analyze the gaps
- 4) Establish improvement goals and take action

This simple exercise can be repeated on a continual basis for improvements not only in the HRD framework, but also help in attaining the long term organizational goals.

As stated by Rao (2007), the term “comprehensive evaluation” indicates a detailed study of various components of HRD against a conceptual framework as well as the current organizational environment and requirements. Multiple methodologies are suggested ranging from individual to group interviews, from CEO to the lower level (representative sampling at each level), and also study the secondary data available in the organization in terms of records.

The audit helps to point out areas of modification for meeting the organizational needs in the following areas:

- HRD Competencies: HRD audit attempts to assess the competence of various personnel through knowledge testing, attitudes and values testing, 360 degree assessment, HRD function assessment, and assessment centres. This covers the competency levels of HRD department, line managers, top management and the HRD staff
- HRD Structure: The HRD audit attempts to highlight the current status, strengths, weaknesses, cost effectiveness and other vital elements of the HR structure, and aligns it in accordance with the business goals of the organization.
- HRD Styles: HRD audit takes into consideration the styles of the top management, and studies its congruency with the HRD philosophy.
- HRD Culture and Values: The HRD audit also attempts to study the extent to which the organization has OCTAPACE values and culture, that is, a culture which fosters Openness, Collaboration, Trust, Authenticity, Proaction, Autonomy, Confrontation and Experimentation.
- HRD Impact: The audit studies the impact made by HRD interventions in terms of their contributions to outcome variables or process variables.

The HRD Score Card (Rao, 2007) is an assessment of the HRD maturity level of any organization. It assigns a four letter rating which represents the four critical dimensions of HRD contributing to organizational performance, namely, HRD systems maturity, HRD Competencies in the company, HRD Culture and values, and HRD impact. The research suggests to collect data item wise and then rank accordingly and give grades as per the score obtained on each item.

HRD SCORECARD				
Name of the Organization			Hospital	
HRD Systems and Strategies	HRD Competencies	HRD Culture and Values	HRD Impact	Overall HRD Maturity grading
B	D	C*	D	BDCD

Figure1: HRD SCORECARD

Source: Rao, T. V. 2007

In the present glocal environment, characterized by rapid change, intense information flows and increasing competition, emergence of higher education institutions holds an important place. In today’s knowledge based economy, higher education

institutions are playing as centers for human resource development and aid in the development of the human resources (King, R., 1995). Also, universities currently face immeasurable complexities and turbulence in their external environments and their internal set ups are consequently under the pressure to adapt in an effective way. (Brock, D. M., 1997). On the one hand, universities are increasingly being required to teach ever increasing number of students in increasing numbers of specializations and disciplines and on the other they are being asked to pay more attention to quality of teaching and educational programs. (Uma Shanker, Dutta, 2007)

All over the world, universities are facing the challenge of being the centers of excellence for teaching as well as research. The university administrations today are clearly interested in any activities that could significantly impact the performance levels of the Universities, as are the other stakeholders (Hammond et. al., 2004).

Mashhadi et. al. (2008) state that balanced score card can be used as an instrument to help Higher Educational Institutions in developing a comprehensive view towards organization's strategic position in the present global environment.

Scope of the Study

The scope of the present study extends to the Education Sector. For the purpose of this study, two Higher Education Institutions have been identified, namely, The University of Jammu and the University of Kashmir.

The **University of Jammu**, accredited as 'A' grade University by National Assessment & Accreditation Council of India came into existence in 1969 vide Kashmir and Jammu Universities Act 1969 following bifurcation of the erstwhile University of Jammu and Kashmir.

The University provides instructions in such branches of learning as it deems fit and makes provision for research and the advancement and dissemination of knowledge. The University stands for spiritual and material elements in life, thirst for knowledge and virtue under the backdrop of holy peaks of Trikuta Hills. University of Jammu holds examinations, grants degrees, generates knowledge and confers diverse academic distinctions on persons who pursue approved courses of study in the University or in constituent colleges/institutions approved for the purpose also for those who appear as external/private candidates.

It also confers honorary degrees or other distinctions on the persons of exceptional caliber. The University also admits, maintains, recognizes, affiliates colleges and other institutions. It is primarily a research, teaching, affiliating, examining body involved in promotion of arts, science and other branches of learning. The University is open to all classes and creeds with the sole objective to carry people from darkness to light.

The University of Kashmir takes its origin from the erstwhile Jammu & Kashmir University which was established in 1948. Later on it was bifurcated in to two full-fledged universities with University of Jammu for province and University of Kashmir for Kashmir Province. As per this bifurcation the University of Kashmir came in to

existence on 5th of Sept 1969 by an Act of State Legislature called Kashmir and Jammu Universities Act 1969. At the time of its establishment the University had 15 post-graduate departments, 5 constituent colleges offering professional degree courses in the faculties of Medicine, Engineering, Agriculture, Unani Medicine and 12 degree colleges affiliated with it providing courses up to B.A, B.Sc. and B.Com level.

In addition to these there were affiliated to it six Institutes engaged in teaching of oriental and modern Indian languages. Distance learning was instituted in the University in early seventies. The spectrum of research activities was broadened as many new teaching and research centers were established in post seventies. Academic activities in the University took a boost in mid eighties and many more post-graduate departments were opened. The University was accredited by NAAC and placed as an "A" grade University of the country with 87% score.

Today the University is spread over three campuses. While the main campus is located at Hazratbal, Srinagar, the North Campus at Delina, Baramulla, and the South Campus is situated at Fatehgarh, Anantnag. The University has at present 09 faculties, 35 post graduate Departments, 17 Research and other centres, 04 Post-graduate Centres, 40 Govt. affiliated Colleges, 06 Constituent Colleges, 07 Oriental Learning Colleges and 74 temporarily Affiliated Colleges offering professional degree courses

Research Design

The present study is conducted by collection and analysis of data in a way to study and evaluate the Human Capital Management Systems in Universities under study and to undertake a comparative analysis along Human Capital Management Systems between the organizations under study on the basis of research findings. The study also aimed to suggest a improvements in the HRD System for the organizations understudy. The research design is based on the following hypotheses:

H1 Balanced Scorecard serves as an instrument for HRD Audit

H2 No variation exists across the Universities with respect to Human Capital Management.

Data Analysis and Discussion

The study is conducted on the non teaching section of the two Universities and the data has been collected by administering the Questionnaire designed on five point Likert scale adopted from the HRD Instruments (Rao,2007). Representative sample from each cadre , including the officers and the staff is taken. The universe comprises 1349 employees from University of Jammu and 2100 employees from Kashmir University. The questionnaire is based on the standardized format developed by Rao, T. V.(2007).The reliability is ascertained by applying Cronbach alpha and the results show a very high reliability.

Table 1. Reliability statistics

Cronbach's Alpha Based on Standardized Items	0.981
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The data is collected by administering a self designed questionnaire based on the factors as identified in the HRD ScoreCard2500 (Rao, T.V.,2007) The data is collected by conducting personal interviews. The collected data is analyzed by first tabulation and then application of various statistical measures.

The comparison of the HRD parameters of the Jammu University and University of Kashmir is done by using the mean scores. The analysis shows a average mean score for both the Universities on Manpower Planning and Recruitment, which includes a detailed analysis of statements on Manpower requirements of each department being identified well in advance, retirement and vacancies forming a part of manpower planning, manpower plans being prepared for 3-5 years, selection process being objective and ensuring competent persons being recruited, valid and standardized tests are being used for recruitment.

This shows that both the Universities have similar systems of Man Power Planning and Recruitment in operation. Similar results are seen for the factors "Potential Appraisal and Promotions" and "Career Planning and Development". The mean scores for factors "Performance Appraisal and Management System" and "Learning Systems/ Training", are quite low at 2.82.

This shows that employees both from the Officer Cadre and the Staff are not satisfied regarding this factor at both the Universities. A further analysis shows that the lower staff is very less satisfied and feels that this factor is not applied in the University in both the Universities. For the analysis of the factor "Development Systems", which is analyzed under factors "Learning Systems and Training", Performance Guidance and Development" and "Other Mechanisms" the mean scores are towards the lower level of satisfaction.

These factors include probing questions like "HRD department follows up seriously the training needs as mentioned in PMS", "Training leads to experimentation and action". To analyze the factors relating to autonomy and creativity, the questions relating to the factor "Role Efficacy" are asked.

The analysis of the mean scores of this factor shows that the employees feel that these parameters are not true most of the times. Similarly the analysis of the scores obtained on the factors relating to "Organizational Development" and " Action Oriented Research" shows that most of the employees feel that this is not followed most of the time. The responses of the employees of both the Universities are towards "somewhat true" for the Factors related to "Quality", "Empowerment" and "Information". The respondents' mean scores are towards less satisfaction level regarding "HRD Climate".

All the respondents from both the Universities have marked the Factors "Competency Mapping", "360⁰ feedback", "Assessment and Development Centers" as not at all existing.

Table 2: Comparison between the Universities

HRD Scorecard Factors	Jammu University	HRD SCORE Jammu University	Kashmir University	HRD SCORE Kashmir University
A1 Manpower Planning and Recruitment	3.55	B	3.62	B
A2 Potential Appraisal and Promotions	3.23	B	3.5	B
A3. Career Planning and Development	3.25	B	3.15	B
B1. Role Analysis	3.8	B	3.5	B
B2. Contextual Analysis	2.82	C	2.9	C
B3. Performance Appraisal and Management System (PMS)	2.12	C	2	C
C1. Learning Systems/ Training	2.8	C	2.5	C
C2 Performance Guidance and Development	2	C	1.86	D
C3. Other Mechanisms	2.48	C	2.5	C
C4. Worker Development	2.93	C	3	B
D1. Role Efficacy	2.49	C	2.3	C
D2. Organizational Development (OD)	2.6	C	2.4	C
D3. Action Oriented Research	1.86	D	2	C
E1. HRD Climate	2.15	C	2	C
E2. Values in the Organization	3.87	B	3.9	B
E3. Quality Orientation	3	C	3.5	B
E4. Rewards and Recognition	2.44	C	2.3	C
E5. Information	3.2	B	3.5	B
E6. Communication	2.3	C	3	B
E7. Empowerment	3.75	B	4	B
F. HRD Function	2.15	C	2	D
G. Competency Mapping, 360 Degree Feedback and Assessment and Development Centers	1	E	1	E
G1. 360 Degree Feedback	1	E	1	E
G2. Assessment and Development Centers	1	E	1	E

Where, 5 stands for Very Much True (90-100 percent)
 4 stands for Mostly true (75 percent)
 3 stands for Somewhat True(50percent)
 2 stands for Not True, most of the time (25 Percent)
 1 stands for Not at all true and perhaps the opposite may be true (0-10 percent)

For testing the null hypothesis that no variation exists across the Universities with respect to Human Capital Management t test is applied to the sample, which accepts the hypothesis at .05 and .025 level of significance.

Table 3. Overall perception on the HRD SCORECARD for Jammu University and Kashmir University

Factors	T Value	Tabulated value for t at .05,.01 and .001 level of significance are 1.96,2.32 and 2.57 respectively	Multiple Correlation Multiple R=0.76 R ² =0.57 Adjusted R ² =0.56
A Career System	0.567*		
B Work Planning	1.436*		
C Developmentt System	1.141*		
D Self Renewal System	0.310*		
E HRD	-4.98***		
F HRD Function	2.32**		
G Competency mapping, 3600 Feedback and Assessment Development Centres	000*		
Overall Mean:Jammu University- Kashmir University	-0.05*		

*p<=0.05

**p<=0.01

***p<=0.001

The R and R2 Values show a perfect fit relationship among the variables, where it is considered that the parameters, namely, Quality Orientation, Rewards and recognition, Information, Communication and Empowerment in the E Factor named HRD impact are considered as the result (dependent variable) of the rest of the Factors (Independent Variable).For further analysis of the relationship between the HRD factors and the Outcome Factors a two way ANOVA is applied.

Table 4. Two way anova

Source of Variation	SS	Df	MS	F	P-value
JU-KU	0.018225	1	0.018225	0.47929	0.614498
HRS-Impact	0.390625	1	0.390625	10.27285	0.192532
Error	0.038025	1	0.038025		
Total	0.446875	3			

The P Value (sig. at .05)(P Value >.05) shows that there is no significant difference between the human capital management aspects between the two Universities. There is no significant difference between the HRD and the impact factor mean values as p value>.05.

The grades have been given on the mean scores for the parameters as described in the HRDSCORECARD, (Rao, T. V,1999; 2007).The Grades , which have been given on the mean scores, the mean score 1 suggest that the particular parameter is all together missing in the University as so a grade “E” is given; for mean scores lying between 1-2, grade ”D” is given; for mean scores lying between 2-3 grade “C” is given; for the mean scores lying between 3-4 grade “B” is given and for the mean scores 4-5 grade “A” is given. This shows that Jammu University has attained a C Grade for “Performance Guidance and Development”, where Kashmir University has attained D Grade. Also on “Communication” Jammu University has attained a C Grade, where Kashmir University has a B Grade. Also, for the “HRD Function”, Kashmir University has scored a D Grade , where Jammu University has scored a C Grade.The results of the HRD Impact factors have thus shown a difference in Grades

as for parameter, “Quality Orientation” , Kashmir University has scored a “B” Grade, while Jammu University has attained a “C” Grade.

Conclusion and Suggestions

The Overall HRD Systems Maturity on the HRD scorecard for both the Universities lies at a low grade ranging between C and B grades. This shows that no work has been done till date on the development of HRD as a separate department in the Universities, although the employees recognize the need for the same. There is lack of in house training facilities and the Performance management System is not at all developed. There is lack of developing a linkage between the performance and rewards. There is lack of career planning and succession planning and no system for potential appraisal exists in both the Universities. Also, Though Jammu University has scored a grade higher in communication but then it also lies in grade “C” which shows that there has to be a role clarity and the communication system has to be improved. This can be done by communication of job responsibility and the key result areas to the employees. This in turn requires integration of the individual performances with the organizational goals by increasing the involvement of the employees.

Human Resource professionals functioning in this role can serve as an important source of information for strategic workforce planning, continuous learning, and knowledge management initiatives. High-performing organizations also recognize the need for leveraging the internal human capital function with external expertise, such as consultants, professional associations, and other organizations, as needed. The Human Resource function must also provide the metrics that drive improvement across the organization. These range from top-level strategic analysis, including modeling and planning, to operational data.

Building a Human Capital Management strategy does not require a sea change, but it requires a commitment to a philosophy, and a realistic approach to delivering results. Effective organizations need to integrate human capital approaches as strategies for accomplishing their mission. The effectiveness of this integration is judged by how well it helps achieve organizational goals. High performing organizations stay alert to emerging demands and challenges and remain open to reevaluating their human capital practices in light of demonstrated successes or failures.

Human Resource professionals can assist their organizations to evaluate the extent to which human capital approaches support the accomplishment of programmatic goals, through the use of workforce planning. Workforce planning efforts, including succession planning, linked to strategic goals and objectives, can enable an agency to remain aware of and be prepared for its current and future needs as an organization, such as the size of the workforce; its deployment across the organization; and the knowledge, skills, and abilities needed for the agency to pursue its mission. This planning will entail the collection of valid and reliable data on such indicators as distribution of employee skills and competencies, attrition rates, or projected retirement rates and retirement eligibility by occupation and organizational unit.

Human Capital Management can help Universities to prepare a skills inventory and Higher Education Sector benchmarks for India, to identify current problems and plan for future improvements. The assessment of human capital can be carried out by using the HRD Scorecard, which identifies human capital elements and underlying values and helps to integrate their human capital strategies with their strategic and programmatic planning.

This study empirically supports the application of HRD Audit in the Higher Education Sector in India. The results show that the HRD Function, in the Universities is still in the infancy stage in India. The theoretical background and the research studies reveal the importance of human capital development for the higher education sector. The shift towards the knowledge based economy has projected HR function as the “nerve Centre” of any organization. In the backdrop of continuous change, the need for institutionalizing HRD function, in the Universities in India, becomes important.

The HRD SCORES obtained further suggest that the higher education sector in India, needs to develop Assessment Centres for the employees to make them more accountable to the society at large. The step by step process suggested is to first, establish a HRD department at the centre level and then secondly to adopt a planned approach to Manpower planning, Career System, Training and Development. Thirdly, the Performance Management System at the Universities has to be made open and transparent. Fourthly, with the increasing diversification of knowledge at the higher education level, empowerment has become a necessity and this can be linked with the performance management system. Finally, the integrative approach can never be attained unless a positive work culture or a collaborative culture, with openness transparency proactiveness and experimentation is developed.

The research shows the practical implications for learning interventions, which need to be applied strategically, in view of the environmental changes. This implies a need for HRD Audit, which would examine the nature of the HRD Interventions required and compare them with those applied and the analysis of the gap, thus, would help in suggesting the improvements required in the HRD Function in the Universities, which would lead to the human capital development for a developing economy like India. This paper gives a lead to the future research on identifying any one parameter and analyzing it deeply. This also gives a lead to developing a standardized HRD Systems for the Higher Education sector. Also, the research can be applied to any organization in the service sector.

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Customer Relations Management – Approach for, Both Communication and Economics Point of View

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Abstract

Purpose – This paper deals with certain aspects related to the customer relations management from the perspective of the organization, but also from the client's point of view regarding the increase of its contentment.

Methodology/approach - The paper enlarges upon three ideas related to this topic: the change of paradigm from the relational marketing to the customer relations management, the communication with clients and also the relations management with Romanian clients.

Findings – There are explained concepts like: relational marketing, the client's loyalty, the strategy of maintaining the client, the client's fidelity, and lifetime clients

Research limitations/implications – The concept of "lifetime client" becomes nowadays out of date; we can speak only about a high level of loyalty, because in Romania consumers have become more and more exacting.

Practical implications – The change of paradigm from the relational marketing to the client relations management not only worldwide but also in the case of Romania was possible due to certain premises which are identified and described in the paper.

Originality/value – There are underlined also the advantages of this strategy, of keeping the client: the increase of the clients' loyalty based on the increase of the satisfaction, the low cost of buying, more profit from the current clients.

Key words: customer relations management, clients' loyalty.

Introduction

Nowadays, when competition becomes increasingly fierce on international markets, companies have found that a policy of market segmentation or of focus efforts on niche markets is not sufficient, or as effective as before.

From this need it has been developed the relational marketing concept - the establishment of a profitable company-customer relationship.

Lately a new concept emerged, with a wider coverage and tends to become the new philosophy of marketing companies that act, namely customer relationship management. Global economic and financial crisis which currently exists requires a new approach to customers, at least in terms of communication.

Paradigm shift from relational marketing linked to the Customer Relationship Management

The transition from relational marketing to customer relationship management primarily reflected the understanding of the "client" in a business, the "customer relationship" and the need to "develop strategic relations" with them.

In this way the consumer interest is transferred to the client.

Assumptions that formed the basis of these changes may be:

- many companies have found that some of their customers are more valuable and that from them comes most of the income; Pareto Principle suggests that 80% of revenue a company are made of 20% of its customers, on average the most profitable customers represent only 10%, 60% are within 30% breakeven and may cause loss;
- developments in information technology has enabled companies to better know their customers and identify the most profitable market segments;

- emergence of direct marketing has allowed more detailed understanding and knowledge of customers to compiling lists of customers to achieve detailed database, and made history of made acquisitions and profit with each client by analyzing a huge volume of customer data to identify segments of customers who have a similar behavior and evolution was possible to analyze their behavior and accurate assessment of the value they bring company; direct marketing has allowed the identification of profit made by a client not only based on demographic data, but also on the behavior of its last purchase;
- marketing has not meant a one-way communication, it becomes interactive and involves an active dialogue and relationship with customers;
- The center of gravity is transferred from marketing strategy who puts in center the product or service to a strategy who puts customer in the center because it was found that it is cheaper to identify existing customers profitable among those who might be interested in buying a new product than finding new customers and to establish a connection with them; many companies have realized that most of the revenue comes from transactions with current customers (who retain) and in those circumstances is more profitable to grow market share by exploiting potentials than by acquiring new customers (of course this should not be neglected either).

Due to these premises, the concept of customer relationship management – CRM has appeared and has been developed.

Change hub of traditional marketing, focused on transaction to establish a special relationship between a company and its customers is the result of a series of changes in business climate¹.

Firstly, the competition to attract consumers is much more atrocious. Regional or even local producers have not prevailed, as trade barriers fell and geographical boundaries are restored by giant retailers' blocks. Market access is not set nationally; the reality is rather that of partnerships and multinationals, which have enough strength to withstand the market.

Secondly, markets are more fragmented. In developed economies it was much change from mass marketing - combined with a demand exceeding supply - the market segmentation, the marketing of differentiated, one-to-one. This marketing strategy is based on the premise that each customer tends to be more loyal and also recommends products or services of a certain company, if company policy is going to meet unique needs specific to each customer.

Thirdly, consumers are becoming increasingly demanding. Their expectations, both in terms of products and services are increasingly higher. Today consumers compare their purchase and consumption experiences with a very high standard for products and services. For example, if a consumer has a car rental experience that it takes two minutes and a minimum of bureaucracy, it will want to know why it takes half an hour, more phone calls and more paper to book a hotel room. Expectations are higher and higher. What satisfied consumers a year ago, is no longer expected to meet now. What other time was considered a high near luxury today is considered a hygiene factor and simple decency.

Fourth, product quality has increased greatly in recent years and can not be regarded as a competitive advantage. Indeed, consumers are the same as in a number of products of the same type, so tend not to be loyal to certain brands. Brand loyalty based solely on product quality becomes relative. As product quality has increased and this is reflected in a series of products of different companies, companies are seeking to obtain a competitive advantage by establishing special relationships with customers, and based on differentiated services.

Fifthly, the emergence of electronic markets that are growing requires a different kind of communication with customers, especially in terms of promotional communication. While online trading is still shy in Romania, Internet purchase in the West is increasingly gaining more ground. The portals themselves become brands, which mean they can sell assortments of products from different places and different nature. Amazon, for example, is one of the biggest portals in the world; it sells books, electronics, sports equipment, software, cosmetics, garments and shoes etc... All under the Amazon brand. Increased sales volume and profit goal pursued by all firms required a new approach to markets and customers and the transition to customer-based business philosophy.

Table 1. highlights key differences between relational marketing and customer relationship management.

Table 1. Relational marketing vs. Customer Relationship Management

Key differences between relational marketing and customer relationship management		
Criteria	RM	CRM
Strategy	Marketing strategy focused on customer	Organizational strategy focused on customer
General management	Customer Relationship Management	Adopt customer-oriented business philosophy at organizational level
Level of development	Marketing Department	Organization as a whole
Relations in organization	Subordinate CRM	Controlling MR
Purpose / Role	Developing customer-oriented strategies in the marketing department.	Introducing a customer-oriented organizational vision;
Brand management	Brands are created to meet a specific market segment.	Brand management is losing ground to the customer.
Change Management	Limited marketing department.	Redefining the functional roles and work processes in the organization
Communication	Effective communication with customers at the marketing department	Overall organizational communication with synchronized messaging clients.
Employee involvement	Low	High All employees must be active in the process of building customer relationships.

Communication with customers in the context of Customer Relationship Management

There is no universally recognized definition for customer relationship management. Summarizing what exists in literature, it can be said that customer relationship management (CRM) means establishing, maintaining, developing and improving relations between the organization and its customers (in the sense like a win-win relationship) and focuses on understanding and satisfying the wishes and demands of customers, items which are placed in the center of any business strategy firm performance. In this context, communication plays a vital role being at the same time an element of differentiation. The role of communication increases once with the presence of the myth of "customer for life."

Until recently customers were loyal. Nobody likes to be a good won forever. Today there are very changeable, depending on the benefits associated to the products or services; they will migrate from one brand to another.

As a customer for life practically doesn't exist, there must be found means of improving long-term loyalty. "Interactivity" era has made possible the communication between companies and customers in such a degree that the products begin to be designed by the specificity and customer preferences.

Thus, the traditional brand management is losing ground to an integrated model "business value" that combines brand, customer and other values promoted by the company.

Internet has returned an important role in creating new visions: the customer is in center and assumes greater importance than the importance attached once to the brand.

Communication with customers must be effective. Only by a thorough knowledge of how the communication process works it is possible to develop effective communication strategies, to develop messages with maximum impact and to be chosen the most appropriate communication tools and promotion. When speaking about communication process, organization meets both a transmitter rol and the role of receiver.

For effective communication it is required detailed analysis of customer behavior, to know in depth the way you browse an individual to reach purchase decision. This path begins with studying the needs, motivations and desires may continue with their transformation into applications, which if they are effective could lead to the act of buying.

There must be identified also difficult personality types to find appropriate communication methods and techniques.

Direct communication is a reliable method of retention. Communication, in particular promotional communication must take account of the life cycle stage in which is the client: attraction, growth and development, and maintenance / retention. Activities

and communication and promotion tools which will be used must be chosen so that the impact is maximum.

Companies have begun to segment customers in terms of communication with them. Thus, they can be called "the omniscient", "the non-believer", "the indifferent", "the negotiator." For other companies they are called "the analytical", "the fan" the promoter ", "the controller". Communication style, attitudes and behaviors will be different depending on the category of customers.

There are many communication problems. An important cause of poor communication within a company is due to ignorance of communication barriers. Communication barriers are factors affecting the efficiency of communication that can occur in all parts of the communication process: issuing, message encryption, transmission channel, receiver or decoding.

Regarding communication barriers, we can mention the most common: differences in perception, hasty conclusions, ignorance, filtering, semantic problems, lack of interest, etc...

Lately it is manifested a keen interest from companies for the acquisition of effective communication techniques with clients, especially the sales agents. A special importance is represented by the development of empathy, active listening and the techniques to capture attention.

Issues about Customer Relationship Management in Romania

Customer orientation has long been neglected in Romania.

In many companies there is an excessive focus on money which must be taken from customers and little attention is given to customers, product / Service to be provided and must meet more and more customers. The phenomenon broads especially when increasing portfolio of clients. There are no databases that can meet the requirements for a detailed analysis of customer behavior. In many companies in Romania there is confusion about the concept of customer relationship management.

For some, customer relationship management means just to implement loyalty programs, for others to create a database with customer information that can be used for a finer segmentation of the market, but few have implemented integrated customer relationship systems and have a clear idea of how to use information technology in customer relationship management.

The main reason that prevents the creation of computerized systems for customer relationship management is the allocation of small amounts of budgets for achieving this target, due to the mentality of most managers that do not have a long term vision.

There are differences of approach to customers based on company size. Small traders, for example, use first as a way to attract and retain customers' low prices, meaning lower prices than the competition. Second place would be direct communication with customers and attention with which it is treated.

They also organize their own promotions, separated from the ones organized by other companies' manufacturer or wholesaler which are within the distribution channel. Large firms operating in trade, such as large network of stores (like Carrefour, Metro, Real, etc...) use as methods of attracting the clients a varied portfolio of products, special offers, discounts and promotions.

They sometimes also use innovative methods to attract and retain the buyer, such as questionnaires in store, tastings, etc...

As regarding communication with customers, new communication methods are based to some extent on existing information on customer databases and are used as communication channels, including: Internet, phone and mail, and these are also tools to promote products and services.

Conclusions

Any company is faced with a portfolio of profitable, very profitable and less profitable customers, or even unprofitable. The first thing that should be done as customer segmentation with regard to this criterion - the profitability.

One of the mistakes made by organizations is to focus efforts and resources (material and human) only on segments of customers with a high profitability rate, neglecting those segments with lower profitability, but which can certainly make a profit, even if not equally important, on the long term. The issue is as follows: a higher profit from a small number of customers or one single profit, and even important to secure a greater number of customers? These segments may be attracted to particular programs and designed by an appropriate customer relationship management. Firms must determine those key success factors that can contribute to significant profitability. There must be found original methods to achieve loyalty.

Romanian organizations must adapt quickly to the global trend of business strategies focusing on customer management to compete multinational companies that successfully apply the principles of this approach.

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KPO Industry in Romania Through the Lenses of Generation Y - Lessons to Be Considered

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Abstract

Purpose – *The main purpose of this paper is to highlight the features of Gen Y employees in outsourcing companies in Romania, with a focus on the Knowledge Process Outsourcing (KPO) pioneer, Evalueserve.*

Methodology/approach - *We have commenced with a qualitative research through personal observations inside the KPO organisation Evalueserve, in Cluj-Napoca. Further, our study included a quantitative primary research by means of a survey applied to some 40 Gen Y employees. We sought to examine the interest towards general working conditions, work relationships, personal skills, and work activities of Millennials activating in KPO and if Romanian employees are driven by a set of specific values.*

Findings – *The research findings partially confirmed our expectations. The analysis of the input we received led us to the conclusion that outsourcing companies such as Evalueserve offer a suitable work environment for their Gen Y staff.*

Research limitations/implications – *Are given by the case study approach; the identified trends can not be generalised to the entire KPO industry in Romania.*

Practical implications and Originality/value – *Due to our efforts to separate Gen Y myths from realities in the KPO business, our findings may be integrated in management practices and result in more consistent strategies in outsourcing companies.*

Key words: *Generation Y, case study, Romania.*

Introduction

In the past 20 years, post-communist economies have embarked in societal changes meant to reduce the gaps between these states and traditional market economies. Romania took a major step towards modernisation as international companies began to set up centres in its main cities. The economic recovery from the prolonged recession through most of '90s, along with the NATO and European Union memberships and the overall low labour cost, jointly contributed to the country's recent turning into a hot spot for investors. Like most post-communist nations in Central and Eastern Europe, Romania sought to capitalise on its strengths, primarily relying on its existing talent pool. Language, mathematics, and programming skills are typically strong in Romania and are largely untapped by local companies.

The rise of KPO services in Rumania

In the wake of the economic crisis, companies have struggled to reduce their costs and to revise their internal processes to increase efficiency. Hence, the outsourcing sector has gained popularity. Following the anti-communism revolution in 1989 and the subsequent opening of national markets, Romania managed to seize a portion of the offshore outsourcing pie, particularly in sectors such as IT services and support, contact centres, back-office support, or Business Process Outsourcing (BPO).

Big names such as Siemens, Alcatel, and Motorola have set up research and development, software development, or manufacturing facilities in Romania. Cost savings, operational efficiencies, access to a highly talented workforce and improved quality were all expectations driving the offshoring of high-end knowledge based processes (Dashrath, 2008). Time zone in Romania enabled local outsourcers to easily target European clients. The specific disadvantage threatening the outsourcing activity was

that the labour legislation does not recognise as a distinct business (The Diplomat, 2010).

As for financial attractiveness, people skills, and business environment, the AT Kearney Global Services Location Index showed Romania climbed in 2009 from the 39th position to the 19th, as an outsourcing location (The Diplomat, 2010). Estimates on outsourcing industry in Romania indicated that some 50,000 people work in this sector in Bucharest, the capital of Romania, and another 50,000 outside this city (The Diplomat, 2010). Genpact (with 1,500 employees), Wipro (about 800 staff) and Teleperformance (some 500 people) are amongst the largest BPO employers in Romania.

As recorded by Liddell (2008), the difference between Knowledge Process Outsourcing (KPO) and BPO is that for the latter, the process has already been well-defined, while in KPO there is no such process and clients receive more value-added, implying more complexity. KPO enables clients to unlock their top-line growth by outsourcing their core work to locations that have a highly skilled and relatively cheap talent pool. This is considered to be the single most important factor that differentiates KPO from its predecessor, BPO (Dashrath, 2008).

Profiling millennial as employees

Generation Y members, also called Millennials, are those born roughly from 1980 to 1994, and their main traits are in fact a response to current corporate realities – economic cycles, jobs that are not guaranteed, and profits seemingly pre-eminent.

As stated in the specialised literature, most important traits of Millennials comprise the facts that they are mobile, aspirational and tribal, seek work-life balance, promote positive relationships and expect consistent messages (Salt, 2007). Further, they have high expectations of employers and need ongoing learning; Millennials also desire immediate responsibility (Spiro, 2006). The young generation enjoys being challenged and treated respectfully, learning new skills and working in friendly environments, with flexible schedules and high pay (Deloitte, 2005).

Case study – people in evalueserve

“We should stop calling people mere resources!” This is how the Chief Operating Officer of Evalueserve seeks to better address the needs of the company’s employees – by treating them as individuals instead of human resources. The global research and analytics company Evalueserve, specialised in KPO, opened its first European research centre in Cluj-Napoca, in 2008. With the establishment of this centre in Romania, the company significantly enhanced its delivery capability for European clients, along with much deeper insights on continental locations, based on a much better understanding of the local context. The Romanian office brings together some 40 analysts from nine countries (Sweden, Germany, India, Latvia, Russia, Republic of Moldova, Poland, France and Romania) and covers 13 language capabilities.

The most representative findings of a research conducted mostly with Evalueserve employees in Romania are as follows. We must underline that our key findings must be regarded as part of a case study, and do not necessarily apply to the whole business environment in Romania.

Methodology

Our study followed a three-stage methodology to analyse the Gen Y employees forming its scope. First of all, in the pre-evaluation stage, we observed the work environment in Evalueserve, and sought to draw a couple of directory lines to illustrate Millennials' behaviour. After this pre-evaluation stage, we started a primary research (in fact a survey, the instrument being the questionnaire) in order to identify how the expectations of Gen Y employees in outsourcing companies in Romania (actually in Evalueserve) may be properly addressed by executives' policies. Thus, we embarked on our study by circulating a six-question survey to Gen Y employees in Evalueserve, in May 2010. All questions have been closed-ended; respondents had to rate a series of factors pertaining to what they are generally considering prior to deciding for a position and to their overall current job satisfaction. A total of 24 employees answered to our survey, 8 of them being foreign nationals; their average age was 26 years, and the women-to-men ratio was 2.4 to 1.

The final stage has been the evaluation and the statistical analysis of results. We have selected the most important aspects of the working life that most employees agreed on, and compared them with 'standard' traits of Millennials. Also, we have tried to identify the influence that Romanian culture has had on Gen Y working with Evalueserve. In order to compare the answers of several respondent categories (women vs. men, Romanian citizens vs. foreigners), we have also introduced a correlation coefficient, that measures the strength and the direction of the linear relationship between answers. Any coefficient with a module value greater than 0.3 demonstrates a medium-strong correlation and has been taken into account for our analysis (Ratner). We also looked at smallest values and tried to figure out why the correlation has been so weak in those cases.

Key findings of our research

Amongst the most obvious tendencies, there was the fact that nearly all employees have had previous working experience, even though sometimes extremely limited. Of course, knowledge of English language was a pre-requisite for each employee. Professional and academic backgrounds are very different and range from chemicals, economics, or foreign languages, to geography or statistics. In the office in Cluj-Napoca, Romanian nationals are about twice as many as foreign employees. Out of the second category, most Millennials have been recruited due to their niche language capabilities, such as Swedish, Polish, or Bulgarian. Despite visible differences in terms of culture, education, or background, all young employees easily manage to work together as teams and effectively communicate, due to what we believe can be summed up as 'belonging to Gen Y'.

Feminine versus masculine preferences

Through a simple analysis of the study results, it becomes evident that the salary is a very important aspect to be taken into consideration when deciding for a job for half of the respondents. This tendency is in line with the need for independence underlined by the literature we have consulted. However, it is surprising that men considered the remuneration to be of less importance – only 2 rated it as ‘very important’ (8 percent of all interviewees).

However, illustrating a larger degree of so-called business aggressiveness, 75 percent of male respondents granted the most importance to career growth opportunities. Indeed, Millennials are believed to seek rapid promotion and expect to go up the organisational ladder with relatively little sacrifice (Proctor, 2010).

Women who responded showed a very limited appreciation of extra benefits at work, such as health insurance or meal tickets (very important for only 29 percent). However, they did place an emphasis on the variety of job responsibilities (76 percent) and on the recognition of their efforts (71 percent), showing they are more open to challenges and new experiences.

Overall, general working conditions (such as hours worked daily, schedule flexibility, location, or vacation time), do not seem to influence to a great extent the degree of satisfaction or the acceptance of Millennials’ position in the organisation. Nevertheless, pay and promotion potential appear to be crucial factors influencing job satisfaction (very important for 50 percent of respondents and 75 percent, respectively).

The results of our study further showed that the company has only partially gained employees’ loyalty, although the commitment of most Millennials has increased in the past half a year. Most of them declare they would perform similar activities for a different company and intend to change employer in the next five years. This may be due to the fact that activities in a KPO organisation are highly demanding and hierarchical levels are limited, especially in the centre in Cluj-Napoca, with its about 40 staff. Most employees state that they did not know what their activities were going to be when they got hired, which again proves a certain communication deficiency in the organisation – probably as information takes more time to get from Indian headquarters to Romania centre, and from higher executive levels to fresh employees. However, most Millennials agree that information is being freely shared amongst team members.

An answer triggers another – correlations

By analysing the correlation coefficients (CC) we have calculated, we unveiled a series of interesting tendencies (see Appendix 1). One of the findings was that respondents who did not think that the level of salary is very important valued new skills acquiring (CC -0.447). Furthermore, they also placed little emphasis on promotion and work environment.

Predictably enough, for those who believe that career growth opportunities are very important, the amount of hours worked is also worth taking into consideration (CC

0.333), mainly because they expect long hours to be followed by promotion offers. However, the independence in accomplishing work tasks seems to be of less interest to this category of respondents. On the other hand, a Gen Y employee that places a great importance on the hours spent at work will also be more likely to be attracted by a higher pay and not show a strong commitment to the organisation (CC 0.338).

As for the recognition for the work accomplished, the tendency of Millennials was to relate it to the utilisation of their skills (CC 0.387), but not the learning of new skills (CC -0.041). Employees who expect their efforts to be acknowledged do not place a great importance on vacations and most likely spend part of their spare time at work.

Surprisingly enough, Millennials who place a great importance on their career paths do not consider the work environment to have an influence on their motivation (CC 0), although the dedicated literature emphasises the fact that a pleasant workplace is decisive for the loyalty of young employees. Further, an interesting, yet weak negative correlation, appears between the need for the recognition for work accomplished and the number of hours worked (CC -0.053). This can be seen as Millennials' desire to develop their knowledge base and improve performance, regardless of official rewards or acknowledgement. However, we have to keep in mind that Gen Y employees do wish to rapidly go up the hierarchical ladder and this requires their superiors' appreciation and respect. The recognition of work accomplished seems to be very important for those who also value the opportunity for utilising existing skills and talents (CC 0.293), which may indicate that Millennials intend to build their professional success on a merit-based foundation and appreciate a true and accurate scale of values.

Professional development is strictly related to new skills acquisition and the Millennials we have interviewed mostly agree with this statement. They often associate it with a high variety of tasks to be completed (CC 0.302), with the independence in decision making (CC 0.395) and with the utilisation of existing skills and talents (CC 0.529), as employees have to evaluate their current position and capabilities in order to draft a strategy for further development. However, flexibility and a friendly work environment do not score high in the case of Millennials who value new skills learning (CC -0.046 and 0, respectively), possibly due to the choice to focus on future capabilities instead of fully enjoying day-to-day activities. Nevertheless, this would prove a medium/long-term orientation of Millennials, which contradicts the general opinion that they rather opt for immediate results and rewards.

An obvious and logical result indicates that the variety of responsibilities at work is closely related to the utilisation of skills (CC 0.486). Gen Y employees are aware of their strengths and potential and hence seek to avoid boredom and the flattening of their learning curve. They also seem to consider that a high pay should reward the completion of a large variety of tasks – that, of course, need a certain degree of independence to be effectively addressed. Furthermore, the independence we mentioned earlier appears to be inversely proportional to the importance of having a friendly work environment (CC -0.354). It is only normal that Millennials in these categories evolve in opposite directions, as independence is often associated to a preference towards an individual work style, in which every employee's attitudes can be better expressed and followed.

Another interesting result of our study was that Gen Y employees who attribute a great importance to the utilisation of their current skills, contradict the general opinion that Millennials strive for work-life balance – since holidays are not highly rated, nor is the work environment (both CC score 0). Apparently, they prefer to focus on professional activities instead of bonding with their colleagues or superiors.

The fact that Millennials seem to appreciate both their vacation days and a healthy and pleasant work environment does not come as a surprise, but rather as a logical flow (CC 0.5). A high salary motivates them to the extent in which it allows the purchase of a satisfactory holiday package (CC 0.251); since we have noticed that about half the respondents (46 percent) have travelled abroad in last half a year.

However, Millennials seem to believe that the purpose of their activities is meaningful for the society, and that executives personally care about their staff and their clients. As they enjoy socialising and networking, many Gen Y indicate that they have a best friend among their colleagues (63 percent) and a coach/mentor to support them daily (75 percent).

Last in the correlation analysis we have undertaken, advancement opportunities turned out to have a medium strong direct relationship with the quality of work environment (CC 0.354). This element shows that Gen Y employees who value team harmonisation not only seek to obtain higher positions in the company's hierarchy, but also to develop and maintain a relaxed and friendly rapport with their co-workers.

Born in Romania or abroad – any difference?

After analysing correlation coefficients, we set out to emphasise whether or not Romanian Gen Y employees present any particular features that differentiate them from internationals.

First of all, we noticed that the salary levels appear to be more important to Romanians (75 percent of responses), maybe due to the fact that the national economy does not have a tradition of open market; hence, employees tend to be more preoccupied with respect to what they earn and to how this is negotiated.

On the other hand, other nationals consider career growth opportunities as being more important. Nearly all Millennial employees from abroad (88 percent of responses from internationals) intend to advance their careers, in line with Gen Y worldwide trends. It appears as if Romanian staff is more content with the job they already have; nevertheless, as the team here is smaller, a greater part of the employees have been promoted in the recent past, when compared to those activating in India.

For Romanian employees, it turned out that benefits and salaries are not of extreme importance (very important for 56 percent and 31 percent, respectively). In exchange, Romanians placed a greater importance on holidays and free time (very important for 75 percent of respondents), although only half of them have travelled abroad in the past six months. Flexibility of working hours tends not be very important to Romanian employees (19 percent consider it very important), who value to a greater extent the

working environment, as opposed to foreign team members (92 percent of 'very important' ratings came from Romanians). However, both staff categories do not seem to consider that the location of the company is decisive (very important for only 4 percent of all respondents), although it is said that Millennials do not want to spend much time travelling to and from work.

Company leadership and reputation, social responsibility initiatives, and job titles are equally disregarded by Romanian and foreign employees, contradicting the common belief that they look for renowned enterprises (very important for 25 percent of all respondents, 8 percent and 21 percent, respectively). This may be due to the general economic difficulties, which cause numerous lay-offs and thus employees become grateful to have a workplace, no matter where. None of the foreign Millennial employees regard vacation days as very important, as opposed to 75 percent of all Romanians, who also value a friendly work environment (69 percent).

Surprisingly, none of the foreign Gen Y employees consider that work-life balance is very important for their job satisfaction; at their turn, Romanians have divided opinions regarding this aspect and only a few rate it as very important (25 percent). Another interesting aspect is that very few Romanian employees – 19 percent (and none of the internationals) are very satisfied with the feedback they receive and the communication process inside the organisation. This raises a red flag for managers, who have to acknowledge the need the Millennials have to receive suggestions and comments on their work and to feel they are valued and cared for.

Both categories of Gen Y staff express their disappointment regarding the freedom of choosing what to wear, mostly because the majority of employees do not have direct interactions with customers. However, they are part of a corporation and must adhere to general dress code policies. Recently, the top management decided to revise this dress code and to some extent adapted it to employees' expectations, in the sense that smart casual apparel is allowed throughout the week for those who do not have close contacts to clients.

As for the managerial traits that are the most important in an executive, both employee groups believe that being understanding is crucial. As opposed to foreign Millennials, Romanians most highly appreciate a manager who values employees.

Although Gen Y presumably appreciates friendly, modern and tasteful environments, only one foreign employee defined this parameter as 'very important', as opposed to many Romanian employees (69 percent). This result is supported by our own personal observations, in the sense that Romanians do show a tendency to develop closer relationships with their colleagues, maybe also due to the fact that the office in Cluj-Napoca is considerably smaller than the one in India, for instance, and employees have the chance to interact more often.

Conclusions – implications for managers

By analysing the responses of some of the Evalueserve staff, we have been able to draw a series of conclusions that may be taken into consideration when managers craft their strategies affecting Gen Y employees.

Our case study showed that Millennial employees in Romanian KPO companies follow to some extent the pattern of Generation Y from the specialised literature, but present specific characteristics and attitudes, as well. They appreciate an understanding manager who values employees, and are motivated by high salaries, career growth opportunities, work-life balance, and a friendly work environment. However, the distance from the office and the company's reputation do not seem to be decisive when applying for a job. As we have seen, there are differences between the work approach of Romanian employees, and the one that foreign nationals have. This is why we underline that all executives, notably from international outsourcing companies, should be aware of the cultural particularities in each country where they set up branches. According to Racolța-Paina and Palade (2010), executives may also need to keep rethinking their existing practices and address generational specificity without reinforcing stereotypes.

Different qualities are likely to be associated with certain forms of commitment rather than others, at a time when there is much discussion about the changing workforce. Although managing Generation Y appears to be extremely challenging, our research showed that this topic has not been extensively studied in our country. As way forward, we believe that a quantitative study to portrait Romanian Millennials would be of great use to professionals in the managerial field, especially since outsourcing industries develop at such a fast pace in our region.

The increasing demands and pressure that clients are placing on outsourcing players translate into a real war for talents in the labour market. As new free-market economies still have very little experienced leadership, managers must display personal and strategic flexibility in order to achieve synergies in Generation Y teams.

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Appendix 1

CORRELATION COEFFICIENTS

	<i>Feminine Gender</i>	<i>Romanian National</i>	<i>High Salary</i>	<i>Fringe Benefits</i>	<i>Career Opport.</i>	<i>Hours Worked</i>	<i>Efforts Recog.</i>	<i>New Skills</i>	<i>Task Variety</i>	<i>Role Independ.</i>	<i>Skills Utilisation</i>	<i>Holidays</i>	<i>Flexibility</i>	<i>Higher Pay Opport.</i>	<i>Advance Opport.</i>	<i>Work Environm.</i>
Feminine Gender	1.000															
Romanian Nationality	0.519	1.000														
High Salary	0.275	0.177	1.000													
Fringe Benefits	0.008	0.065	0.275	1.000												
Career Opportunities	-0.159	-0.204	-0.192	-0.265	1.000											
Hours Worked	-0.053	0.204	0.192	0.265	0.333	1.000										
Efforts Recognition	-0.008	-0.259	0.092	0.008	0.265	-0.053	1.000									
New Skills	-0.287	-0.079	-0.447	0.041	0.258	0.258	-0.041	1.000								
Task Variety	0.573	0.299	0.000	0.170	0.098	0.098	0.201	0.302	1.000							
Role Independence	-0.454	-0.313	-0.354	0.259	0.000	0.000	0.130	0.395	-0.060	1.000						
Skills Utilisation	0.015	0.120	-0.338	-0.201	0.293	0.098	0.387	0.529	0.486	0.120	1.000					
Holidays	0.275	0.707	0.167	0.092	0.192	0.192	-0.092	0.000	0.169	-0.177	0.000	1.000				
Flexibility	0.329	-0.073	0.103	0.122	0.296	0.178	0.103	-0.046	0.225	-0.290	0.017	0.103	1.000			
Higher Pay Opportunity	0.146	0.237	0.585	0.038	0.048	0.338	0.146	0.037	0.240	-0.118	0.071	0.251	0.060	1.000		
Advancement Opportunity	-0.065	-0.125	0.000	0.065	0.204	0.000	0.130	0.158	0.120	-0.125	-0.060	0.177	0.145	0.059	1.000	
Work Environment	0.275	0.530	0.000	0.092	0.000	0.000	0.092	0.000	0.169	-0.354	0.000	0.500	0.103	-0.084	0.354	1.000

A Comparative Analysis of Leaders Motivations and Values in Services and Industrial Enterprises

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Abstract

Purpose – Our paper analyses the similarities and differences between leaders from services and industrial enterprises based on their motivations and values.

Methodology/approach - The methodology consists on different types of adjusted GLOBE III (Global Leadership and Organizational Behaviour Effectiveness Research Project in Leadership Worldwide) questionnaires applied to CEOs and direct followers, and semi structured interview with CEOs.

Findings - The results of our research reveal the main leaders' values and motivations and their influence on the leadership behaviour, which can differ or be the same for leaders from services or industrial enterprises.

Research limitations/implications – Participation in the study was voluntary and so there might have been some self-selection bias. Data were collected only from few industrial and services enterprises in Mureş County and the organizations selected do not allowed the results to be generalized.

Practical implications – We consider this issue important for Romanian enterprises because motivational variables and values system play a significant role to achieve economic performance in all development stages of an enterprise.

Originality/value – This study identified, compared and ranked the most important leaders' organizational values and motivations from the perspective of the major decisions making process in services and industrial enterprises.

Key words: leadership, motivation, values.

1. Introduction

Values and the actions that arise based on them can either build or undermine an organization. Superior performance is possible only by transforming followers' values, attitudes, and motives from a lower to a higher plane of arousal and maturity (Bass, 1985).

Motivation theories build on the premise that motivations affect our behaviour. Motivation affects the choice of behaviour, the longevity of the behaviour, and the level of effort (Kanfer, 1991).

Both values and motivation have an important influence on the organizational behaviour, on the performances gained or proposed. This research analyses the comparative situation regarding values and motivation in services and industrial enterprises, in order to identify the similarities and the differences between the two important economical sectors.

2. Why are organizational values important?

Rokeach (1973) defined a value as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.” A belief concerning a desirable mode of conduct is an instrumental value and a belief concerning a desirable end-state of existence is a terminal value. Values may be thought of as internalized nor-

mative beliefs that can guide behaviour. If a person values freedom as an end-state of existence, it means that he or she believes that freedom is preferable to slavery.

Values can be conceptualized in two distinct ways—ipsative in which values are rank-ordered, and non-ipsative in which various values are measured independent of each other. A set of rank-ordered values is called a value system. Only the ipsative (rank-ordering) measurement model can capture the unique value configuration of an individual. Blickle (2000) found that work values predicted the frequency of use of influence strategies measured one year later. Value system congruence between leader and follower could be defined as the extent of agreement between the leader's value system and the follower's value system. Weiss (1978) found that people aligned their values with the values of their leader if they perceived their leader to be competent and successful. Congruence in values between leader and follower forms the strategic and moral foundation of authentic transformational leadership (Bass & Steidlmeier, 1999).

3. Which are the motivational needs within an organization?

David Clarence McClelland, in his 1961 book, *The Achieving Society*, proposed a content theory of motivation based on personality and learned needs of manager mainly. Most of his work was however focused in secondary need (learned need). His theory of manifest needs claims that human motivation is a result of three manifest needs. These are the need for achievement (N-Ach), the need for power (N-Pow) and the need for affiliation (N-Affil). The importance of each need varies from individual and cultural background. For example, some individuals value achievement more than affiliation. McClelland's theory is closely related to the work of Frederick Herzberg.

The need for achievement (n-ach). The n-ach person is 'achievement motivated' and therefore seeks achievement, attainment of realistic but challenging goals, and advancement in the job. There is a strong need for feedback as to achievement and progress, and a need for a sense of accomplishment.

The need for authority and power (n-pow). The n-pow person is 'authority motivated'. This driver produces a need to be influential, effective and to make an impact. There is a strong need to lead and for their ideas to prevail. There is also motivation and need towards increasing personal status and prestige.

The need for affiliation (n-affil). The n-affil person is 'affiliation motivated', and has a need for friendly relationships and is motivated towards interaction with other people. The affiliation driver produces motivation and need to be liked and held in popular regard. These people are team players.

Based on McClelland' theory, we strongly believe that achievement-motivated people are generally the ones who make things happen, and that this extends to getting results through the organisation of other people and resources, although as stated earlier, they often demand too much of their staff because they prioritize achieving the goal above the many varied interests and needs of their people.

4. Methodology

The research results are based on data collected from CEOs and direct followers from industrial and services enterprises in Mureş County, in order to identify leaders' motivations and values. The methodology consists of different types of adjusted GLOBE III questionnaires applied to CEOs and direct followers, and semi structured interview with CEOs. The questionnaire items are built on Likert scale from 1 (Strongly disagree) to 7 (Strongly agree). The selected enterprises belong to different activity fields: industry, trade, constructions, entrepreneurial or non-entrepreneurial types. We collected 60 questionnaires from the CEOs' direct followers and 10 semi-structured interviews with CEOs. We analysed data collected by descriptive statistics, using indicators as weighted arithmetical mean, absolute and percent frequencies.

Responses of the questionnaire were coded and entered into the SPSS and most of the analyses used SPSS. Based on the semi-structured interviews, there were identified the main important leaders' motivations, and the main important personal and organisational values.

5. Data analysis and findings

5.1. Values

5.1.1. Values in services enterprises

Based on the questions related to the CEOs and direct followers values, we analysed the answers collected and the results obtained lead us to the fact that the CEOs and their followers from the services enterprises are guided almost by the same organizational values, but what differs is the rank of their importance. In order to sustain this hypothesis we computed the data from the questionnaires and the results, for the leaders and followers values, are illustrated in table 1. Analysing the questions related to the organizational values, which are important for the major decisions taken within the organization, we obtain means higher than 5 for 8 questions out of all the 17, questions which are highlighted below. The subjects had to choose only one item from all 17 to attribute the highest rank, corresponding to the „strongly agree” option. Using the ipsative (rank-ordering) measurement model, we pursued to capture the unique value configuration of an individual.

Table 1 Values of the leaders and the direct followers from services enterprises

ITEM	Leaders		Direct followers	
	Weighted arithmetical mean	Rank	Weighted arithmetical mean	Rank
Customer satisfaction	6,20	1	6,20	1
Effects on product quality	6,00	2	5,90	3
Employee relations issues such as employee well-being, safety, working conditions	6,00	3	5,63	4
Effect on firm profitability	5,80	4	6,17	2

Employee professional growth and development	5,60	5	5,57	5
Effect on relationships with other organizations with which you do serious business, for example suppliers, government agencies, strategic alliances	5,40	6	5,10	7
Effects on the environment	5,00	7	5,00	8
Ethical considerations	4,60	8	5,23	6
The welfare of the local community	4,20	9	4,17	9
Effect on female employees	3,40	10	4,10	10
Effects of supernatural forces	1,40	11	1,50	11
General weighted arithmetical mean	4,87	-	4,96	-

The comparative situation regarding the weighted arithmetic mean calculated for leaders and their followers for the main important chosen values is shown in Figure 1. Thus, on the first place, both leaders and their direct followers have chosen *Customer satisfaction*, obtaining the same weight arithmetical mean: 6.20.

As to the items *Effect on firm profitability* and *Employee relations issues such as employee well-being, safety, working conditions*, the leaders ranked them on the second position, obtaining the same weighted arithmetical mean: 6.00, comparing to their direct followers who have ranked these two values on the third, respectively on the fourth position.

5.1.2. Values in industrial enterprises

In the industrial enterprises case, the situation is different than in the services enterprises. While the leaders rank on the first place, considering as being the most important value *Effect on product quality*, the direct followers consider *Customer satisfaction* on the first place. On the third place, both leaders and their direct followers from industrial enterprises have chosen *Effect on firm profitability*, registering the same weighted arithmetical mean: 5.80. The item *Ethical consideration* is ranked on the fifth by the leaders, with 5.80 the weighted arithmetical mean, and the direct followers have placed this value only on the ninth, the weighted arithmetical mean result is 4.68. The comparison situation regarding the main important values and their rank in the industrial enterprises is presented in the table 2.

Table 2 Values of the leaders and the direct followers from industrial enterprises

ITEM	Leaders		Direct followers	
	Weighted arithmetical mean	Rank	Weighted arithmetical mean	Rank
Effects on product quality	6.40	1	5.93	2
Customer satisfaction	6.00	2	6.25	1
Effect on firm profitability	5.80	3	5.82	3
Effects on the environment	5.80	4	5.25	6
Ethical considerations	5.80	5	4.68	9
Employee professional growth and development	5.60	6	5.14	7

Employee relations issues	5.40	7	5.29	4
Effect on female employees	5.20	8	4.71	8
Effect on relationships with other organizations	5.00	9	5.29	5
The welfare of the local community	4.80	10	4.25	10
Effects of supernatural forces	1.20	11	2.04	11
General weighted arithmetical mean	5,18	-	4,97	-

5.1.3. Leaders' values in services and industry

Leaders from services enterprises consider as most important value for the major decisions taken within the organization being *Customer satisfaction*, while leaders from industrial enterprises have chosen on the first place *Effect on product quality*. If to the leaders from industrial enterprises an important value is considered *Effects on the environment*, with a weighted arithmetical mean of 5.80, the leaders from services enterprises have ranked it only on the seventh, with 5.00 result of the weighted arithmetical mean. A surprising result belongs to the item *Effect on firm profitability*, which is ranked on the third place by the leaders from industry and only on fourth place by the leaders from services enterprises. The results of weighted arithmetical mean registered by leaders from both analysed sectors are presented in table 3.

Table 3 Values of the leaders from services and industrial enterprises

ITEM	Leaders			
	Services enterprises		Industrial enterprises	
	Weighted arithmetical mean	Rank	Weighted arithmetical mean	Rank
Customer satisfaction	6.20	1	6.00	2
Effects on product quality	6.00	2	6.40	1
Employee relations issues	6.00	3	5.40	7
Effect on firm profitability	5.80	4	5.80	3
Employee professional growth and development	5.60	5	5.60	6
Effect on relationships with other organizations	5.40	6	5.00	9
Effects on the environment	5.00	7	5.80	4
Ethical considerations	4.60	8	5.80	5
The welfare of the local community	4.20	9	4.80	10
Effect on female employees	3.40	10	5.20	8
Effects of supernatural forces	1.40	11	1.20	11
General weighted arithmetical mean	4,87	-	5,18	-

5.1.4. Direct followers' values from both analysed sectors

The most important value, for both industry and services direct followers, is *Customer satisfaction*. If on the second place, direct followers from services enterprises have ranked *Effect on firm profitability*; those from industrial enterprises have ranked *Effect*

on product quality. This situation corresponds to the particularities of the two domain analysed; more oriented to the profitability by the employees from services and more orientated to the product quality by those from industrial sector. On the fourth place, both direct followers categories have chosen the same value: *Employee relations issues such as employee well-being, safety, working conditions*. There are values placed on very different position by the two categories of direct followers, as follows: *Employee professional growth and development* ranked on the fifth place by direct followers from services enterprises and only on the seventh by those from industry; *Ethical considerations* is ranked on sixth by direct followers from services and only on the ninth place by those from industry. The results of weighted arithmetical mean calculated to the direct followers' values are shown in table 4.

Table 4 Values of the direct followers from services and industrial enterprises

ITEM	Direct followers			
	Services enterprises		Industrial enterprises	
	Weighted arithmetical mean	Rank	Weighted arithmetical mean	Rank
Customer satisfaction	6.20	1	6.25	1
Effect on firm profitability	6.17	2	5.82	3
Effects on product quality	5.90	3	5.93	2
Employee relations issues	5.63	4	5.29	4
Employee professional growth	5.57	5	5.14	7
Ethical considerations	5.23	6	4.68	9
Effect on relationships with other organizations	5.10	7	5.29	5
Effects on the environment	5.00	8	5.25	6
The welfare of the local community	4.17	9	4.25	10
Effect on female employees	4.10	10	4.71	8
Effects of supernatural forces	1.50	11	2.04	11
General weighted arithmetical mean	4,96	-	4,97	-

5.2. Motivations

5.2.1. Achievement motivation

Based on David McClelland's needs-based motivational model, we analysed items from the questionnaire related to the three types of motivational need: achievement motivation, authority/power motivation and affiliation motivation, from both types of enterprises.

For the achievement motivation, we have calculated the weighted arithmetical mean, taking into consideration all the items related to this type of motivation, and we obtained relevant results for both services and industrial enterprises' leaders. Leaders from services enterprises registered a higher result, 6.27 than leaders from industrial enterprises, 5.73. These high mean's levels leads us to the conclusion that CEOs, from the analysed enterprises, are achievement orientated. Comparing the results obtained by the two leaders' categories to the items related to the achievement motivation, following issues emerged: the highest weighted arithmetical means were reg-

istered to the items *Seeks continuous performance improvement* – 6.60 in services respectively 6.40 in industry and *Seeks continuous performance improvement* – 6.40 in services respectively 6.40 in industry. All the others items have registered very different results in services compared to industry. The results of weighted arithmetical mean in services were higher than 5, but in industry one item *Sets high performance standards* had registered the mean under 5, respectively 4.90. The means levels of each item corresponding to the achievement motivation are illustrated in Figure 1.

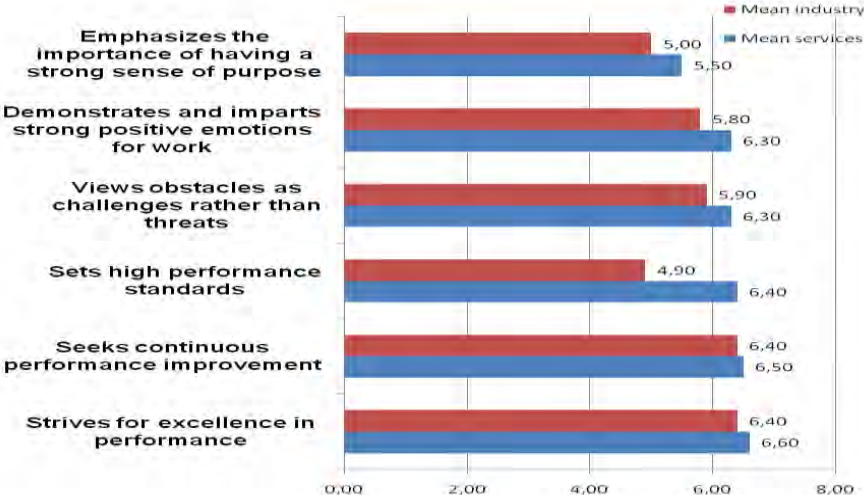


Figure 1 Achievement motivation in services and industrial enterprises

5.2.2. Authority/power motivation

Comparing the *authority/power motivation* for leaders from services and industry, we selected the most important items from the questionnaire, and the weighted arithmetical mean obtained for the services leaders has obtained the highest level, 6.30, while leaders from industry registered 5.63. According to McClelland’s model, the leader, based on this motivation, produces a need to be influential, effective and to make an impact. The results of our study confirm the theory. Thus, the leaders from services recorded the highest arithmetical mean to the item *Shows a high degree of self confidence* – 6.90, while the leaders from industry recorded the highest mean level to the *Highly involved, energetic, enthused, motivated*– 6.30. The means of the most important items related to authority/power motivation are presented in Figure 2.

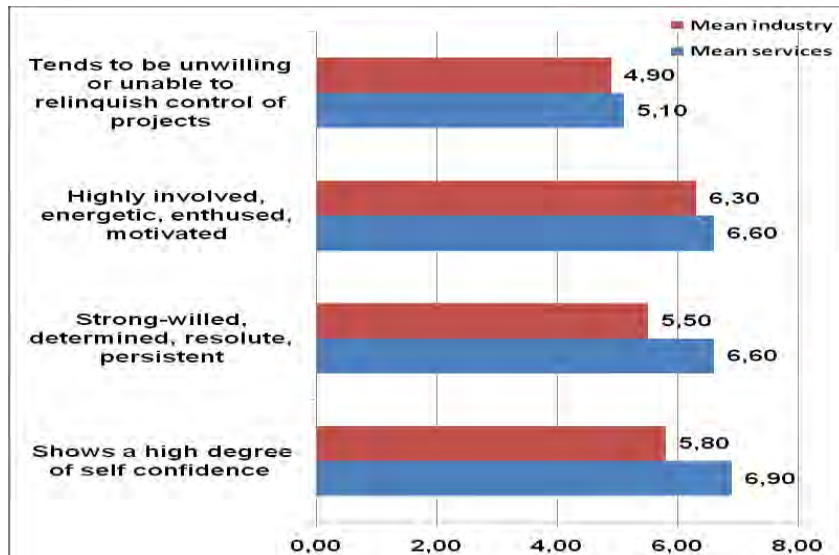


Figure 2 Authority/power motivation in services and industrial enterprises

5.2.3. Affiliation motivation

Regarding the affiliation motivation, we have registered the lowest mean level from all motivations' types for the leaders from services enterprises, 6.25 and the highest mean level for the leaders from industrial enterprises, 6.00. According to this motivation, the leader has a need for friendly relationships, is motivated towards interaction with other people and needs to be liked and held in popular regard, fact confirmed by the answers received to some items: *Communicates with others frequently* with 6.50 in services case and 6.60 in industry case, *Works jointly with others* with more than 6.00 in both sectors. The results for the affiliation motivation, using the most important items, are presented in Figure 3.

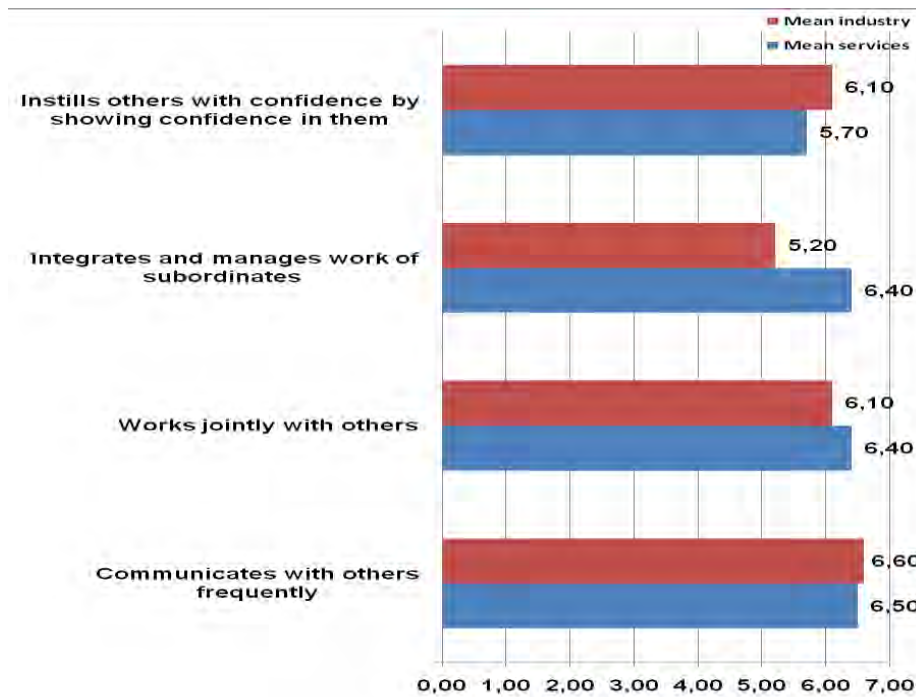


Figure 3 Affiliation motivation in services and industrial enterprises

Conclusions

This study pursued to identify and rank the most important leaders and their followers' organizational values from the perspective of the major decisions process.

Comparing the leaders' values with the direct followers values from industrial enterprises; we conclude that even if the ranks are close to each other, the most important considered value is different. While the leaders have chosen *Effects on product quality* on the first place, their followers considered the most important value *Customer satisfaction*. Both values are related to the results of an enterprise activity, but the direct followers' value shows a higher interest in satisfying their clients, instead of the product quality effect. They seemed to be more oriented to the market directly, and the preoccupation for what is happening inside their enterprise it is coming afterwards.

The situation in services enterprises is different; both leaders and direct followers have chosen *Customer satisfaction* as being the most important value from the perspective of the major decisions process. Another unexpected situation regards the second values chosen by the direct followers: *Effect on firm profitability*, which could be considered more important for the leaders instead of their employees. We expected to register significant differences between leaders and their followers related to the *Ethical consideration* in the process of decisions making, and in industrial enterprises the difference is important, but in the services both leaders and direct followers ranked close to each other. Other analysed values did not recorded important differences.

Values system assumes high importance in the decision process, involving the leaders and their followers as well. We have to take into consideration that leadership is a relationship between leaders and followers, and building this relationship requires an appreciation for the same set of values of those who would be willing to give their energy and talents to accomplish shared objectives within the same organization contributing to its development and efficiency. The differences highlighted in this research reveals the fact that values system depends on the sector's particularities, leaders and direct followers in services enterprises are more close to each other's values than in industry sector.

We have also obtained different results regarding motivations within organisations from services and industry. Comparing the results recorded for the motivation items, we have noticed that the highest mean belongs to the power motivation in services enterprises, and to the affiliation motivation in industrial enterprises. On the second place, it is situated the achievement motivation for both leaders. On the third place, it is situated the affiliation motivation for leaders from services and the power motivation for leaders from industry. We conclude that leaders from services sector are strongly influenced by power and authority, showing a strong need to lead and for their ideas to prevail, to increase personal status and prestige, while leaders from industry are more orientated to the affiliation motivation, revealing need to be liked and held in popular regard, motivated towards interaction with their direct followers.

Studying the motivations and the values of leaders and their subordinates across many industries and over time could be of help in generalizing the results of this study, in order to identify and to explain the particularities of each sector, to establish the specific organizational behaviour.

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Management of Projects Financed from Structural Funds

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Abstract

Throughout history, The European Union's main objective was to establish an economical and social cohesion between its' member countries, besides setting up a Single Market and the Economic and Social Union. Despite the European Union's efforts regarding the allocation of Structural Funds and the accomplishment of the cohesion policy, the degree of absorption of the funds is quite low because of the profound disparity between the member states. The purpose of this paper is to establish the development objectives of the European Union, the instruments and the implementing bodies of the economical and social development projects, the difficulties with which they are confronted, their causes as well as solutions to the problems. The analysis has emphasized that beyond the fund organizing and preparing difficulties of the development projects, an important part is played by the management and monitoring authorities of the Structural Funds, very numerous at the present time, with many overlapping attributions and inexperienced enough in the promotion and managing of structural instruments. Thus, Romania must carry out a development strategy with well-defined objectives, must insure complementary financing and guarantee sources for its' beneficiaries, must train experts in the managing of the projects, but also must insure the simplifying of managing procedures of Structural Funds.

Key word: cohesion policy, structural funds, management authorities.

Introduction

Since the Maastricht Treaty in November 1993, regarding the European Union, the strengthening and social cohesion has officially become one of the objectives of the European Union besides establishing the Internal Market and the Economic and Monetary Union. Throughout the history of post-war European integration, cohesion became more and more important. But as the Union expanded, the achievement of economical and social cohesion has grown to be more difficult because member states became more and more heterogeneous. At present, not all member states of the European Union benefit of the same level of development and the same social and economic advantages. There are pronounced disparities, so pronounced that the 10 more dynamic regions of the European Union have a gross domestic product per inhabitant which is five times higher than the less prosperous regions. The existing disparities between member states have increased because of inadequate endowment with physical and human capital (infrastructure and work force), because of insufficient innovation capacity, because of the low support from small and middle-class enterprises as well as a low level of environmental capital. Implementing the cohesion policy in the European Union consists of a reduction of these disparities and a strong economic growth especially in the new states that have acceded in May 2004 (10), plus Romania and Bulgaria, could represent an important stimulus for the rest of the enlarged European Union economy. But in order to achieve this goal member states and new regions need financial support which is important in solving structural problems and in accomplishing their growth potential.

The socio-economical cohesion policy is above all a policy of solidarity and has a strong instrumental character, being financed through 3 structural instruments – The European Regional Development Fund (ERDF), the European Social Fund (ESF)

and the Cohesion Fund (CF); their main objectives are: convergence, regional competitiveness and regional territorial cooperation. The principles of financial management insured by Structural Funds are: complementary factor – national actions must be complementary with community actions ; partnership – the community actions must rely on a strong reference between the Commission and the member states ' authorities (regional and local) as well as between the economic and social factors ; subsidiary factor – the main development priorities are established by regional and local authorities , but the approval of projects and their management fall under the responsibility of national and regional authorities; additional factor – the community help cannot replace structural public expenses, but development programs can include European funds as well as national funds; compatibility – national development programs and projects must be made according to European Union provisions , policies and actions; multi-annual factor – development program and projects are based on multi-annual integrated strategies, defined on concrete objectives.

European Union's cohesion policy –objectives, instruments and development bodies for socio-economical development projects

The development of the economical, social and politically competitive system of the world, the strong competition between producers, a higher respect for value have led to the development of new management techniques for development projects. Investing in a performing project with well-planned activities and predictable results is in fact a performing business.

We must consider however the fact that there are no such things as perfect projects, a project is always hunted by the unknown, by risks and uncertainty .Thought out time and in all economical, social or political areas, some projects have proven to be serious and expensive failures, most of them irreparable. Thus, the necessity of development and improvement of project management. As a result, the partners of a project, the project council must handle efficiently all technical, economical, social, political and cultural parameters, parameters that stand as basis for the accomplishment of the project, as well as the basis for their relationship. One must consider the impact on future actions, on the products or on the service the consumers are expecting.

In the United States projects represent the main tool for transposing into practice policies and the main tool for the allocation of the federal budget and each state's budget. What is specific about it, is the fact that projects spread through a period of several years, without any deadline, thus many of them are not finalized and the implementation of new sets of projects will start soon. Inside the European Union programs of the same magnitude as American ones are exceptions.

The three Structural Funds, as economical and social cohesion instruments, to which we add the Fishing Fund and the Agrarian Development Fund, aim to solve priority problems of the community policy known as objectives, respectively: the developing of the regions who have fallen behind and of the declining regions, limiting long-term unemployment and making possible socio-economical integration, structural adoption of agriculture and fishing, regional development. The community strategic orientations (cohesion orientations) are issued by the European Commission and they are approved

by the European Union Council; they establish the objectives, the eligibility of regions and actions and as far as each member state is concerned, the National Strategic Reference Framework is part of the National Development Plan and it is approved by the European Commission. The strategic orientations of the European Union are focused on transforming Europe and its' regions into a more attractive place for investment and work, and on a national level the orientations focus mainly on :increasing economic competitiveness, developing transportation infrastructure, improving the environment, developing human resources and decreasing disparity among regions. The cohesion policy of the European Union is made through operational programs which represent management instruments for attaining the National Reference Framework's objectives for each member state, structured as it follows: objectives analysis, the structure of the domain, the illustration of the priorities, establishing targets and indicators, the financial plan, prevision regarding implementation and last but not least, the indicative list of projects.

The main responsibility for coordinating, programming, monitoring the efficient and the management of the projects financed by Structural Funds falls into the hands of each state that benefits from finance sources and it is made through the management Authorities and Intermediary Bodies (ministries, agencies).The Management Authority insures the general coordination and manages the implementation of Operational Programs, and the Intermediary Bodies have attributions established by the Management Authority, mainly about managing priorities and intervention areas, checking activities and project costs. The management of amounts from Structural Funds and Cohesion Funds are made through the Payment Authority.

The role of the Management Authorities as far as the management and monitoring of European Union financed projects through operational programs is concerned, is defined in the relevant articles of the European Community Regulation and it is detailed on a national level through H.G. 128/2006 which modifies and completes H.G. 497/2009, regarding the establishment of the management of structural instruments. The Management Authorities 'main contributions are: the development of the administrative abilities of the structures involved in the ongoing of Operational Programs; the implementation of Operational Programs according to the recommendations and policies of the European Union; the development of selection criteria, evaluation and control of European funds financed projects; the control of efficient and transparent management of European Funds; the presentation of implementation reports to the European Commission and the establishment of monitoring comities for Operational Programs.

Difficulties in the management and implementation of Structural Funds financed projects

Throughout time experience has proven that the implementation of Structural Funds financed projects has come across a series of difficulties, as far as the European Union is concerned but also on a national level, although the integrity standards of the Structural Management Funds were followed step by step by the responsible entities: programming, implementing, evaluating and monitoring. The difficulties that you may come across while promoting them and while trying to get enough European funds can be categorized as it follows:

Programming difficulties (fund) – the impossibility or the incapacity of the beneficiaries to connect the need of development and the opportunity to financing; the impossibility to cross the barrier between “they” and “we”, where “they” represents the management and inter mediation bodies and “we” represents the beneficiaries who are not yet prepared to assume such responsibilities.

Programming difficulties (organizing) – the management Authorities of each member state have been given free hand as far as the procedures are concerned which led to the lack of a unitary implementation and managing frame of the projects, lacking mostly the harmonization activity of mutual procedures. Thus, at a certain point there were three Czech versions of the same English term (e.g. intervention areas)

Programming difficulties (training) – during the first programming cycle, the portfolio of mature projects is prepared simultaneously with the developing procedures. The first finance applicants develop their projects without having at their disposal all necessary developing procedures.

Applicants’ difficulties (fund) – due to the lack of stability in accessing the funds, the applicants look for sources of current activities without coming up with ideas for development projects (objectives, solutions, problems, strategies etc) or they set over ambitious goals and have overrated expectations. Also they are faced with difficulties when asked to highlight the important aspects, to provide demanded information in a clear and concise manner, they lack logical structure or they do not understand the programming frame.

Applicants’ problems (concepts) – they do not understand the principles and demands as far as the following are concerned: equal chances for men and women, solidity (environmental, financial, and institutional), partnership etc.

Technical difficulties for the applicants – the difficulty to capture the real needs of the interested factors, the difficulty in describing and correctly identifying the target group, the difficulty in cooperation as far as partnerships are concerned.

As far as the financial implementation management is concerned, problems may arise in the implementing phase as well as in the phases before this. Thus we must not neglect other countries’ experience. For example, in the Czech Republic, the Ministry of Regional Development was assigned as the central management authority for Structural Instruments. This decision generated a supplementary financial flow demanded by the Ministry of Finance and new procedures were imposed which led in the end to a low absorption capacity.

Greece applied an open policy for Structural Instruments towards as many applicants as possible and especially towards private ones and small-value projects were financed. Due to a bad management of the funds, large amounts of money were returned. Ireland mainly granted European Funds to public institutions which planned major products, but Ireland also returned funds for badly implemented projects.

Romania now ranks as the lowest European money absorption country mainly because of the lack of co-financing sources of the applicants, but also because of the lack of experience of the applicants in drawing up the projects and because of the

lack of experience of the Management Authorities in handling Structural Funds. In this perspective the report cost/benefit generated by the adhesion to the European Union cannot be quantified. Thus, costs are related to the adoption of European norms and policies, to the implementation of European standards, to the assuming of the status of member state of the European Union and last but not least, to the modernization of the Romanian economy. The benefits that come with the status of member state are thus only just potential for now. Romania needs a clear definition of its' interests, an active support for it, a consensual manner with the other member states, coordination, political will, implementation, monitoring and fructification of the results.

Conclusions and proposed measures for the solving of problems related to the management of Structural Funds financed projects

One of the most important measures that Romania must take in order to increase the degree of European funds absorption is connected to the provision of complementary financing sources, respectively through the existing funds in the banks in Romania and their completion with BERD sources, sources from the World Bank or other financial institutions. Also, the introduction of a guarantee system from the Government for the co-financing part from the bank would be most appropriate;

If we want the banks to get involved a mutual analysis of the Structural Instruments Coordination Authority, the Public Finance Ministry, commercial banks and the National Bank of Romania must be done in order to find viable solutions and in order to establish proceedings that will insure the co-financing of eligible projects;

Another important measure is to create a data base comprising assessors, experts and competent financial auditor, which will insure a selection , an instrumentation and a professional evaluation of the promoted projects, because practice has proven that in the case of rejected projects or fund returns, the enforced regulation were either unknown, either wrongly applied;

On a regional level, the opportunity of insuring a unique source of information with respects to the launching, preparing, warning and execution of the projects on the 7 Management Authorities is imposed;

Insuring co-financing from budget funds in order to support efficient projects that fit the development strategy, but which surpass the amount of European funds allocated to that specific area;

It is necessary to perform an analysis of the causes and motivations that led to the massive rejection of projects on certain Operational Programs and the disposal of punctual measures in these areas;

An important measure would be simplifying procedures for the absorption of European funds and the use of budgetary and monetary instruments in order to diminish the effects of the monetary and economical crisis and in order to facilitate the use of Structural Funds;

In the context where a high degree of absorption could be mentioned the Structural Cohesion Funds became 4%-5% of PIB and through a new policy of the European Union , Funds could be given a new mission, a new destination which would support certain important areas or projects of a major, regional importance.

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Sustainability – from Theory to Practice

Management - Social Responsibility - Sustainable Development

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Abstract

This paper is an analysis of the Romanian companies' responsibility regarding the application of the principles of sustainable development, an analysis of the level of awareness concerning the need of change before the evolution of the national and international context from this point of view.

In order to achieve general goal, the authors have designed a survey considering the application of management techniques within the Romanian companies, the extent to which they have implemented techniques of eco-efficiency, the civil society's level of awareness regarding the environmental risks generated by its activities.

A quiz has been sent to a sample made of managers, employers and employees in various domains of activity or regions of the country.. More than 40 percents of the total sample chose to answer, so the authors have identified an increase in the level of interest in the field of human resources, in client-orientedness, participation in the organization management and in the companies' flexibility before evolving market requirements.

The paper is the beginning of a more ample initiative that is to be continued by deepening the research of aspects of sustainable development in textile industry.

The purpose of authors initiative is to raise the civil society awareness regarding (and the participation in the process of decision-making, concerning environment protection.

The originality / value of the paper work rely in the newness of the approach and the structure of the quiz as well.

Key words: *sustainable development, social responsibility, ecology*

Introduction

The changes awaited for in our country, after the fall of the communist regime, have meant a familiarization with the values of capitalism, of the democratic countries in the western world rather than the technological values thereof. These changes rather pertain to the human. Man being the inner engine of society and meanwhile the beneficiary of the social activity, is the hardest material to work with, to model. It is unanimously accepted that mentalities are the most resistant to change.

This paper attempts at highlighting the extent to which employers, managers, employees and simple people perceive the concepts of social responsibility and sustainable development, eco-efficiency. With this purpose a quiz has been designed, being made of three parts.

1. The first part of the quiz tries to establish the level of implementation of the managerial techniques aiming at changing social responsibility within the Romanian companies;

2. The second part follows the level of implementation of eco-efficiency techniques;

3. The third part follows the level of the civil society awareness concerning environmental risks generated through human activity.

The quiz has been sent to about 110 managers, employers and employees in various domains of activity, from various regions of the country. We have received more than 45 answers, that is over 40 percents of the total sample- and this result was encouraging for the survey.

The data obtained have been processed using SPSS-17.

Quiz Answers Analysis

1. Implementing management and social responsibility techniques

The aspects referring to social responsibility are considered within the following items:

1. The question regarding the challenges organizations need to overcome received 87.23 percents of the total answers showing that they are prepared to face the challenges – which means that the organizations operate mid- and long term strategic management. Meanwhile, this high level shows that most employees are young people, interested in and open to the new and possess an optimistic education (see Figure 1). Some institutions, such as state institutions, strongly believe that facing the “new challenges” is a must and, more than that, a moral duty.

2. The fact that 38 percents of the respondents considered that there is resistance to change, while 34 percents of them have given no answer to this question reveals one unquestionable reality: people usually are reluctant to organizational change (see Figure 2). Status quo seemingly needs to be kept through any effort, even through negative actions meant to prove that the action is doomed to failure. Diminishing resistance can only be achieved through continuous dialogue, in order to create a state of communication and understanding of the reasons for change rejection. Also it can be achieved through the correct and flexible implementation of the change. The most important thing with change is creating the sense of solidarity with change and the celebration of success.

A good example is people’s mentality. Living for long in a regime characterized by certain rules, constraints or policies, people have created a personal conception regarding change – especially regarding changes that are innovative or unheard of. They are skeptical of everything that is new and important. A means of annihilating or at least diminishing this resistance is to aggressively promote and progressively educate population with regards to change.

Bureaucracy is increasing and none wants to eradicate it. Nowadays, information technology is, for some managers, a source allowing to inventory new model sheets, statistics, reports that need to be updated each and every week and posting them onto the web page is an “emergency”; yet these tools aren’t used for client satisfaction. A solution could be more freedom in the work carried out by the employee in relation with the clients, using the opportunity offered by the efficient use of information technology to reduce bureaucracy.

To conclude, lacking knowledge associated with habits often lead to resistance to change. This resistance is most often met with people with a more “difficult” personality, unable to adapt to the new, with an obsolete way of reasoning. A way to diminish it is very good communication with the employees; the company objectives need to be well known to each of them, and also the applying strategy needs to be well explained for each of them to know exactly what he is expected to do.

Generally, the idea that “it works this way, too” seems to corrupt many people very easily. Even a simple optimization of the work process, for which the employees were asked to verify one another, has risen significant objection. Finally, the employees need something palpable, the proof that the new idea works better than the traditional methods.

3. The question asking whether „Is there implemented, or organized, in your company, a course on the implementation of a system of quality management?” received 85.11 percents positive answers, indicating that organizations in our country are constantly preoccupied with the quality of the products and services they provide.

4. Managers’ social responsibility as well as their managerial technique can take the form of donations or sponsorship integrated to a long term strategy, but can also manifest as volunteering, expertise, services – all offered to the beneficiaries gradually. Though it requires increased efforts, the benefits for the company image are considerable. This fact is understood and applied by Romanian companies as well, as one can see in the statistical analysis on the matter (see Figure 4). On a 1 – 6 scale (1 – low; 6 – high), 85.11 percents of the total answers marked it as high as 4 or higher.

5. The less the planet resources are, a responsible behavior is necessary and proves to be even applicable for those populating and exploiting the Earth. The people’s duty to preserve the properties of the environment must bring systemic changes in the population’s way of life, in the market and the societal organization, in order to live in harmony with all the rest and with the planet itself. The answers to the question are more than positive (see Figure 5). More than 70 percents marked it 4 or higher.

There are three general principles according to which managers must take into consideration the responsible behavior of the organization. Thus:

- A company’s right to exist depends on its responsibility towards environment;
- Governments may introduce strict laws if businesses don’t include social standards in their organization;
- Policies based on social responsibility leads to social acceptance and implicitly consolidates its viability.

Rendering activity managers responsible, from this point of view, is not necessarily new: most enterprises, especially smaller ones, have always been close to their communities and always tried to be „good citizens”, as early as the beginnings of trade. In fact, many businessmen instinctively realize that „doing what one must do” – serving their clients, taking into consideration the personnel’s safety and morals, loyal competition and environment protection – all make up the commercial common sense. [Bowen H.R. , 1953]

6. More than a third of the total number of respondents believe that the most important factor of social change is the cultural one – based on technological innovation and scientific discovery, closely followed by the political results thereof, leading to excessive politization of institutions and organizations (see Figure 6). Beyond scientific considerations, the success of political decisions largely depends

on their acceptance by the civil society who, in the spirit of better transparency regarding the final elections and the assumed responsibilities, should actively participate in all the stages of the process of implementation of the development policies.

The challenges pertaining to development are worrying enough for the civil society to mobilize in order to support the political decision makers and the necessary societal and industrial changes.

7. “The EU considers SME’s (small and medium-sized enterprises) real locomotives of development and innovation. And now – what are the reasons for the consideration of the EU? “

This is a question most respondents answered that easier adaptation to client needs is the main reason in favor of this approach (see Figure 7).

SME’s represent 99 percents of the total number of EU enterprises and they are considered the key to economic growth, innovation, creation of new jobs and social integration to the EU market. In a global context, characterised by deep crisis and higher and higher competition pressures, smaller dimensions sometimes prove to be troublesome especially in the economic domains characterized by strong economic actors. It is thus necessary to closely cooperate with the European Investment Bank so that the 30 billion Euros allowed for SME’s sector go support these enterprises for real, using structural and guarantee funds. Innovation incentives are provided according to Framework Programme 7.

For the revival of the textile sector – strategic throughout Europe, both because of its strong SME component and of the impact of globalization over the markets and their opening (e.g.: the entry of Asian products on the European market) – companies making “green” investments will be particularly stimulated.

8. When asked whether “your company’s strategy contains activities subscribed to a Socially Responsible attitude”, 70 percents of the respondents hold that their strategy contains this kind of activities, which means that the Corporate Social Responsibility (CSR) is a solution for Romanian SME’s as well. (see Figure 20)

Though born in different business cultures, though operating in different contexts, there are enough analogies between the Romanian and the western SME’s. These resemblances can stand for an argument in favor of turning social responsibility into an attribute of not only multinational companies, but a mere elementary condition of the economic activity in an open market. [Oancea, 2007]

2 Eco – efficiency

In order to achieve the national and European objectives in the field of waste management, actually the whole society needs to get involved, through its representatives: public authorities - central and local, waste producers, professional associations and research institutes, the civil society. The following 6 items deal with this aspect of the survey.

9. “Does your organization collect wastes (paper, plastic, glass etc.)? “ Selective waste collection is at present a voluntary act: citizens can separate and put each waste in its especially designed container.

On the industrial level, things have moved forward much faster. Thus, many factories use waste as fuel, while in some localities they try to use waste for home heating systems. Companies are the first who became aware of the economic importance (and ecological at the same time) of waste collection and recycling.

A percentage of people – selectively collecting waste - higher than 61.7 could be obtained by continuing this process further. For the time being, citizens try to separately collect waste but at the waste bin, they do not have specialized containers for each sort of it; so they do not have where to deposit it. Romania is one of the lowest ranking considering this issue because so far a system of selective waste collection system has not yet been perfected.

10. “Have you replaced incandescent bulbs in your organization / household with fluorescent bulbs (more energy saving)? “

Though respondents’ answers to this question were favorable, we to somewhat extent doubt their sincerity (see Figure 9).

The EU has fixed a precise schedule in order to progressively ban incandescent bulbs in the EU member states. After banning 100 watt incandescent bulbs, in a year’s time 75 watt bulbs will be banned, then 60 watt bulbs – in two years time and 40 and 25 watt ones by September 1st, 2012.

Representatives of the Board of the Union of European Consumers (BUEC) and of the European Association for the Co-ordination of Consumer Representation in Standardization hold that the progressive ban over traditional bulbs will end up in a financial gain for Europeans, resulting from energy saving.

Incandescent bulbs are considered noxious in Europe since most of the energy they consume rather turns into heat than light, and this heat gets wasted. Fluorescent compact bulbs are made of a tube full of gas – a luminescent substance – that produces more light and less heat than the traditional bulbs.

The newer bulbs are more expensive but live longer and allow savings from the electricity bill. Yet we have to consider that these bulbs don’t meet the needs of certain consumers, who must use incandescent lamps because of reasons of employees’ health, such as sensibility to light or skin allergies.

11. Out of the total respondents who answered that they had not replaced the incandescent bulbs, 62.5 percents do not know the benefits thus obtained. The rest of 37.5 percents do not perceive this change as yielding mid-term results (their amortization being achieved in about a year’s time) (see Figure 10).

12. We can notice that 77.27 percents of the companies and civil society own highly energy efficient equipment. The extended law in this field has led a considerable reduction of energy consumption throughout Europe and important

savings arising from low energy bills for European household consumers (see Figure 11).

Within the present day context of global incertitude, the crucial problems of assuring the necessary energy, the impact the emission of greenhouse effect gases and the consequences of the price of energy over the European development must be solved through a powerful policy in the field of energy. [CEECAP, 2006].

13. “When you spend your spare time in the open (over a barbecue, in the woods etc.), what do you do with the waste?”

95.65 percents of the subjects, answered that they respect the legislation in force and deposit the waste in the places especially designed for that when they are in the open (see Figure 12). This high percentage does not necessarily show high social responsibility regarding waste management, but rather a will to change bad habits and practices and, most of all, the wish to live in and become a civilized country.

14. An efficient way – yielding multiple benefits to both the user and society in general – is therefore promoting the use of bicycles. These table shows that more than half of the citizens still chose a car as their private means of transport and only 6.83 percents use the bicycle (see Figure 13). In order to reduce this trend, the authorities should take several measures, such as:

- Building an infrastructure;
- Assuring parking places;
- Offering bicycles from the work place;
- Offering wardrobes and showering facilities;
- Self - example

3 Environment risk awareness

In order to reach a socially and environmentally sustainable lifestyle, the society needs to quit the approach based on higher and higher economical increase, deprived of sustainability, shifting from an epoch of over-consuming and waste to one of welfare based on human and social development. According to the Economic, Social and Environment Council in France, man must be considered a biological and social, cultural and environmental being, which means a person. [NAT/451, 2010]

The following 6 items show the way Romanians perceive this aspect:

15. In order to be successful and efficient and to avoid turning into a populist instrument, society’s participation in the draft of an ambitious development policy needs to be well organized.

Considering that, the results of this survey over sustainable development, the people’s involvement and their exchange of information should be integrated, in 2011, to the process of revision of the sustainable development strategy. This integration should be carried out mainly through an action plan, by financial incentives and by publishing the best practices in the field of collective initiatives of the civil society (see Figure 14).

16. More than 69 percents of the subjects hold that they would allow 2 percents of income tax for an environment foundation (see Figure 15).

17. 25.53 percents of the total number of SME's respondent held that within their organization environment risks are being held under observation and controlled accordingly, while only 6.38 of them held that their activity generates environment risks they don't keep under observation or don't control (see Figure 16).

18. Figure 17 shows that within organization environment protection measures have been taken as follows: selective waste collection – 35.71 percents; energy saving equipment – 21.43 percents; recycled paper – 19.05 and solar panels and devices for the treatment of used water – below 10 percents.

19. Over 60 percents of the subjects hold they do not have an environment-managing department, which indicates a low preoccupation of the impact and consequences of their activity over environment.

20. When assessing the impact over the environment, we need to consider its entire life cycle (from creation to the moment man disposes it). Maintaining the equilibrium between a comfortable life style and healthy environment requires that the development of new products and services include the study and solution for its impact they can have over environment. We can notice that about 50 percents of the respondent organizations take this fact into consideration (see Figure 19).

Sample Structuring

The people answering the quiz are 57.45 percents representatives of enterprises, 14.89 percents of other organizations, 12.77 percents are representatives of the businessmen associations, 6.38 of the university and public institutions and 2.17 percents are representatives of the mass media (see Figure 22). The age of the people answering the quiz is 63.83 percents between 18 and 30 years old, 25.53 percents between 31 and 50, while 10.64 percents are above 50 (see Figure 23). The subjects are 57.45 percents men and 42.55 percents women (see Figure 24).

Discussion and conclusions

The concepts of sustainable development, social responsibility and eco-efficiency represent challenges for the whole planet, who are now trying to diminish the negative effects of the wrong way of action last century, marked by the industrial and consuming society.

For the countries in East Europe, these problems are harder than for the democratic western world, due to the general gap between the two areas. Consequently, they need more effort to achieve the normal levels from the western world.

This paper, the first out of a series we hope will be consistent, tries to highlight our society's situation from this perspective, as seen by the people, be they businessmen, managers or employees, and also to draft possible steps to follow in order to improve management to reduce the gap.

The conclusions to this survey fall under three categories:

- Organization management are aware of their responsibility before the generations to come; yet, for the time being the means and the methods they have, as well as their experience in using them are limited.
- The people's perception and attitude is favorable to management and technological change, which is very important for the achievement of this big step forward, desired by each and everyone, but there is an over-appreciation of the effort taken and the level of its results.
- The European Union, that we ourselves are a member of, represents a real factor of pressure for the acceleration of the processes of sustainable development, of social responsibility and increase of our actions' efficiency, including in its environmental dimension.

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Tables and figures

Fig. 1. The institution is ready to face new challenges

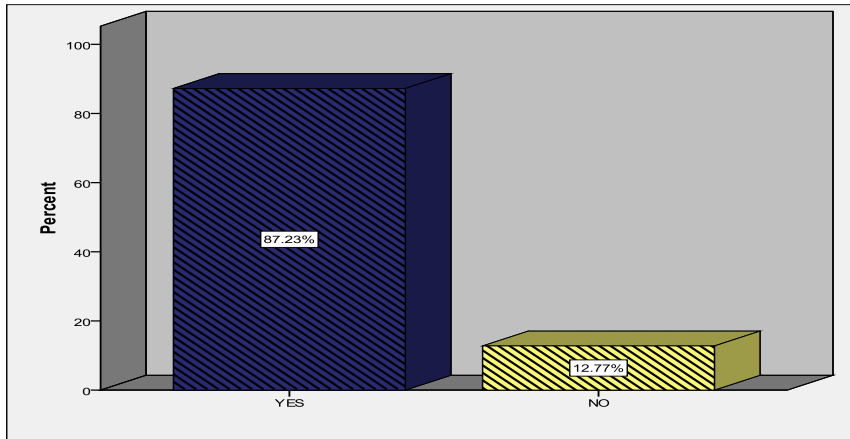


Fig. 2. Opposition / resistance to change

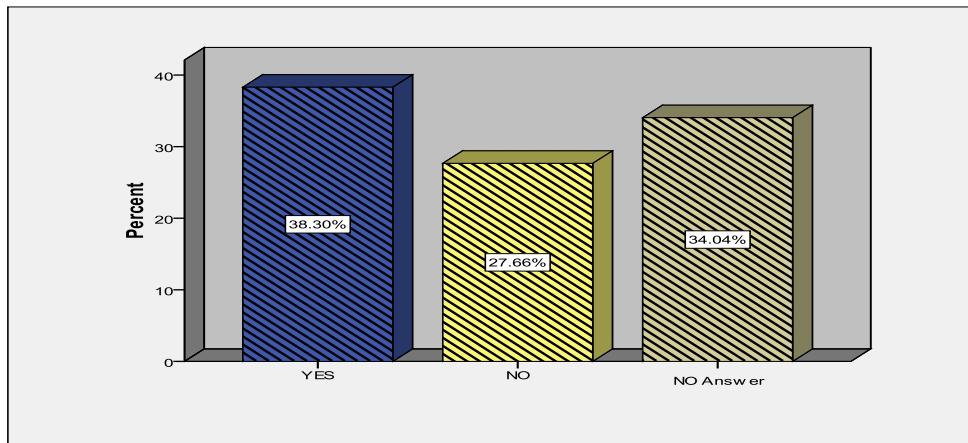


Fig. 3. Owning a quality management system

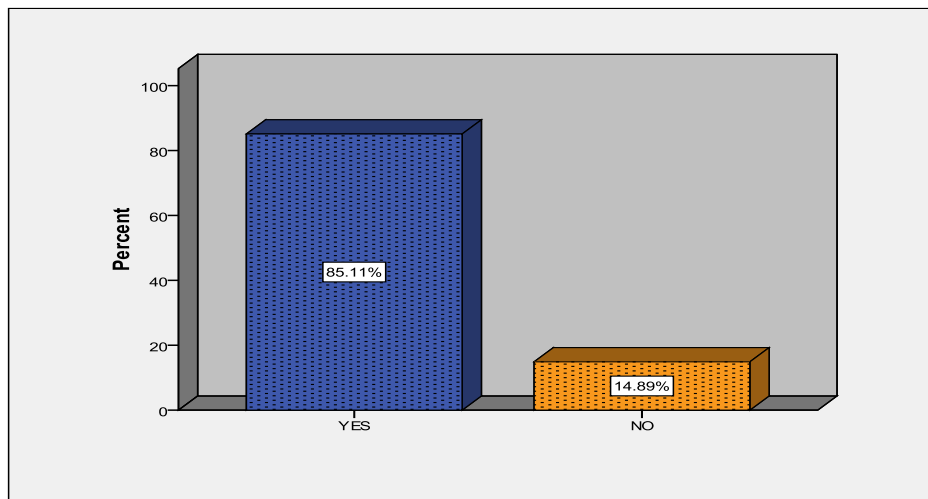


Fig. 4. Social responsibility management

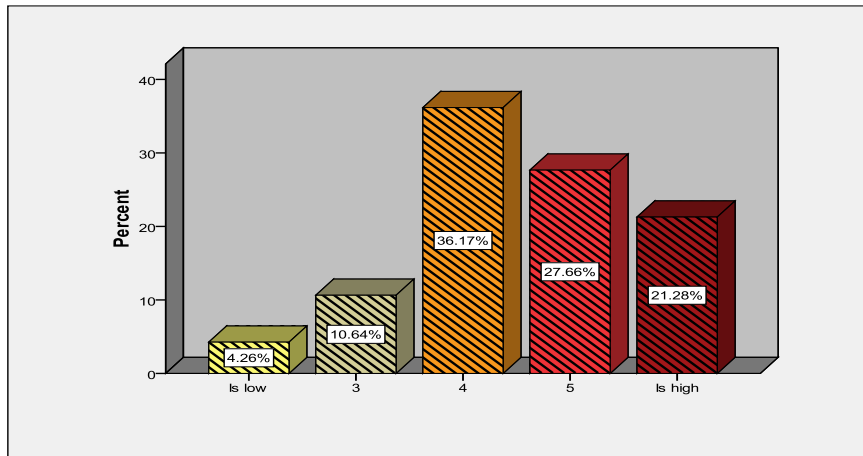


Fig. 5. Safety and environmental health concerns

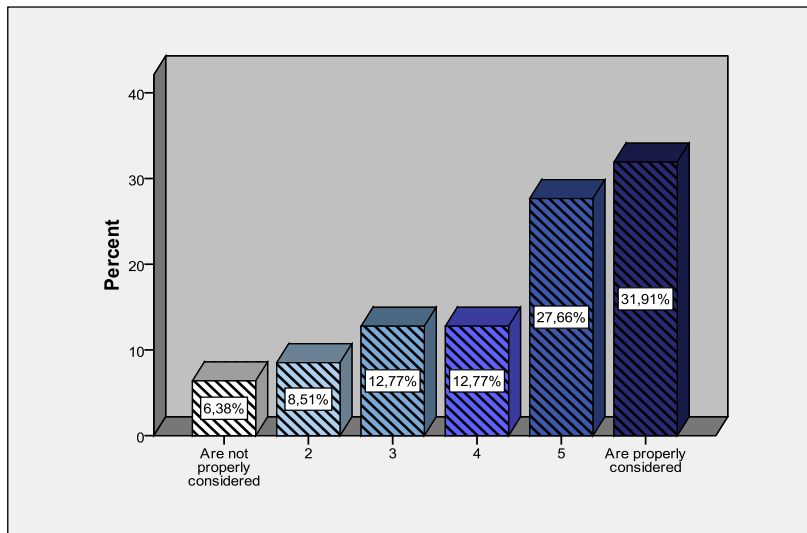


Fig. 6. Social changes considered as important

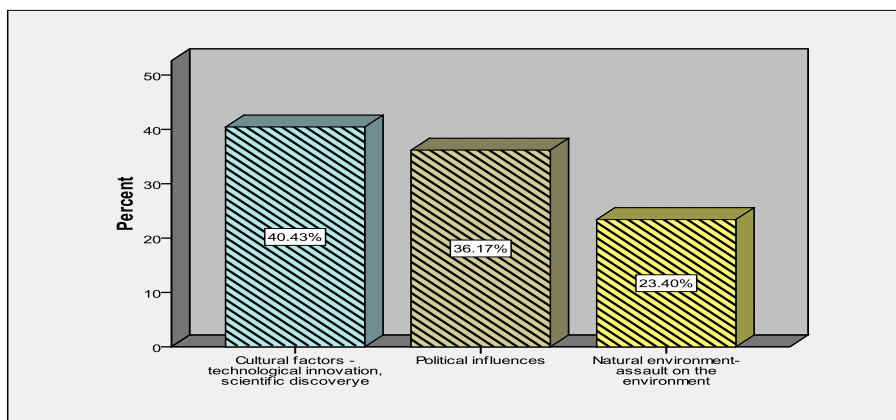


Fig. 7. Considerations appreciation for SMEs

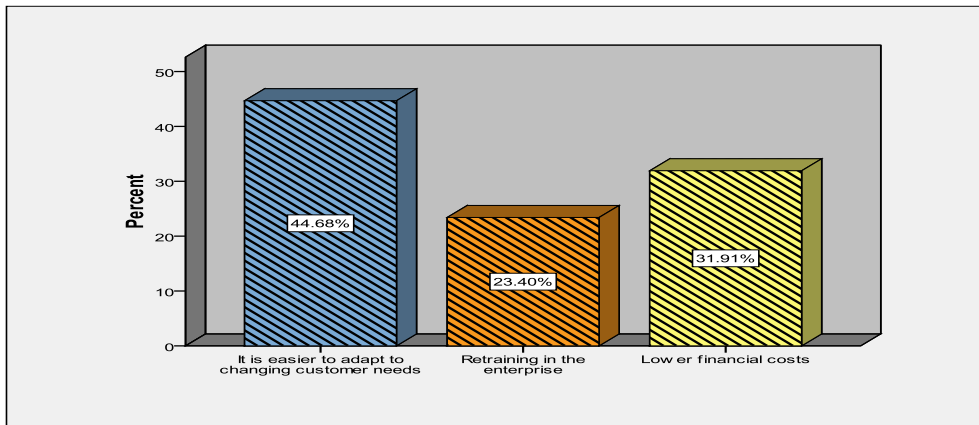


Fig. 8. Selective waste collection

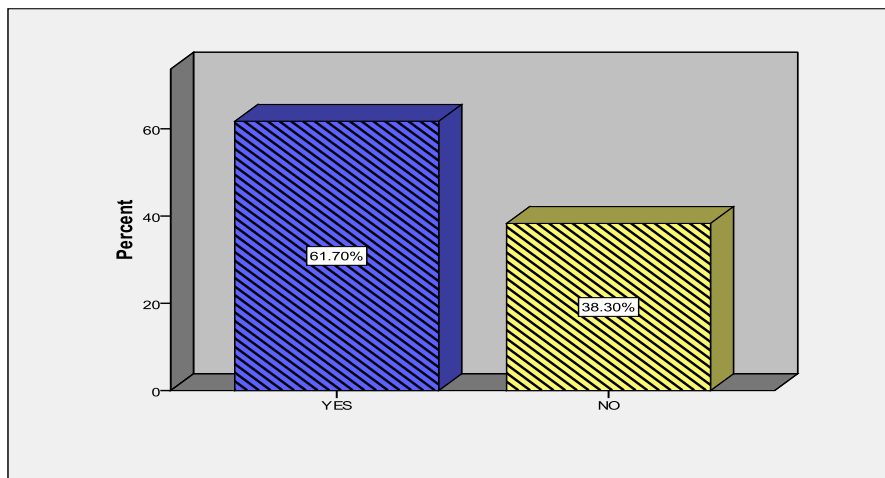


Fig. 9. Replacing incandescent bulbs

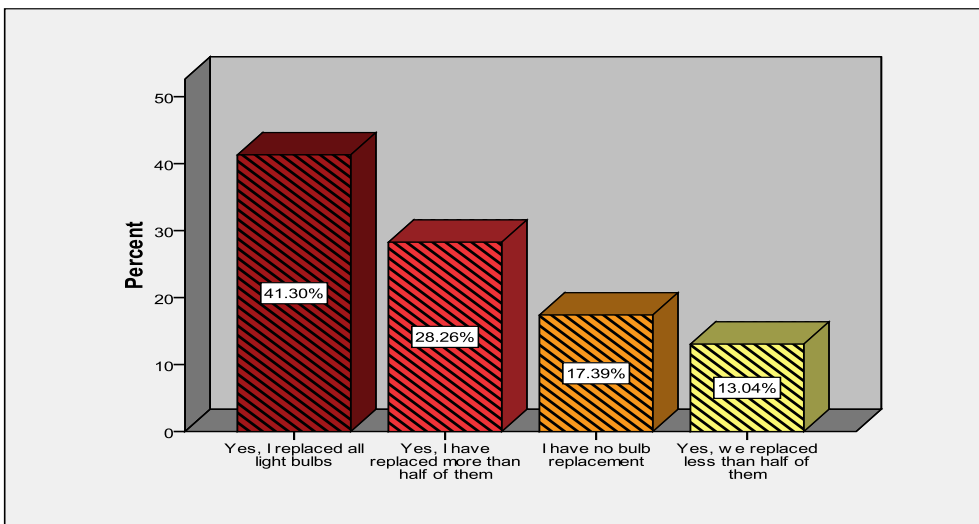


Fig. 10. Why not replace incandescent bulb

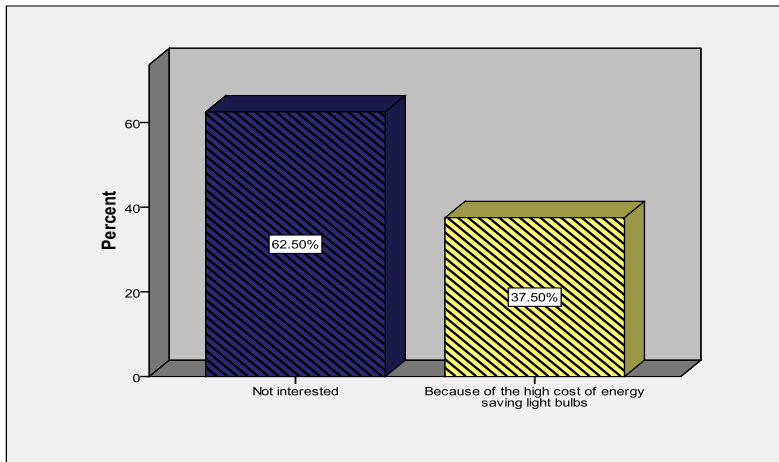


Fig. 11. Class energy efficiency of electronic equipment

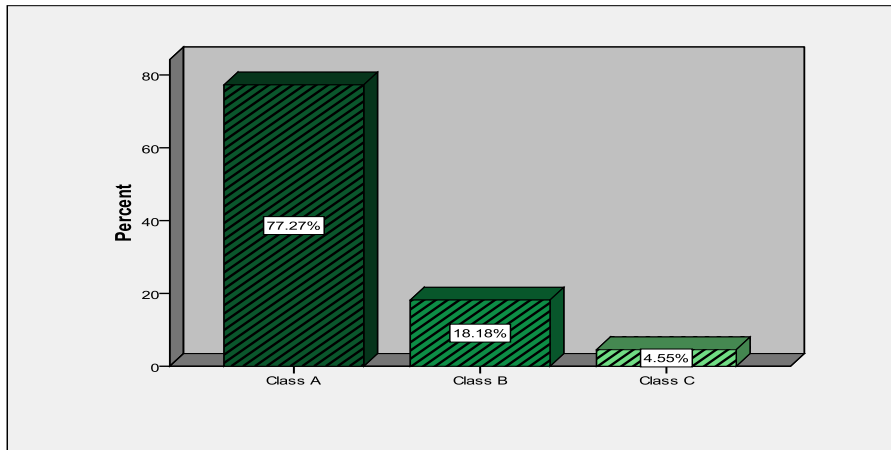


Fig. 12. What do you do with waste when you're outdoors?

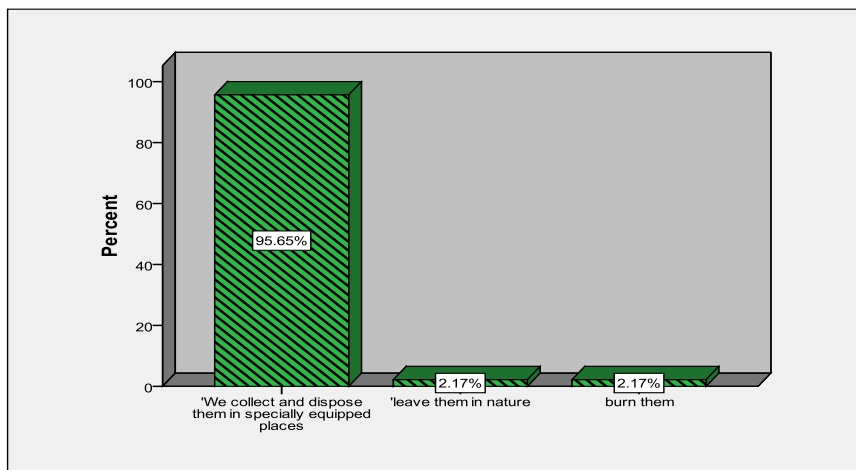


Fig. 13. Travel means most commonly used

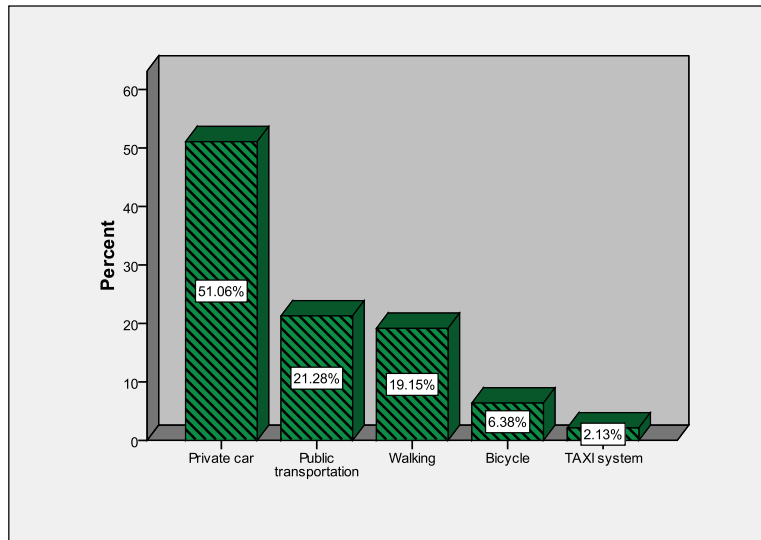


Fig. 14. Your opinion on sustainable development

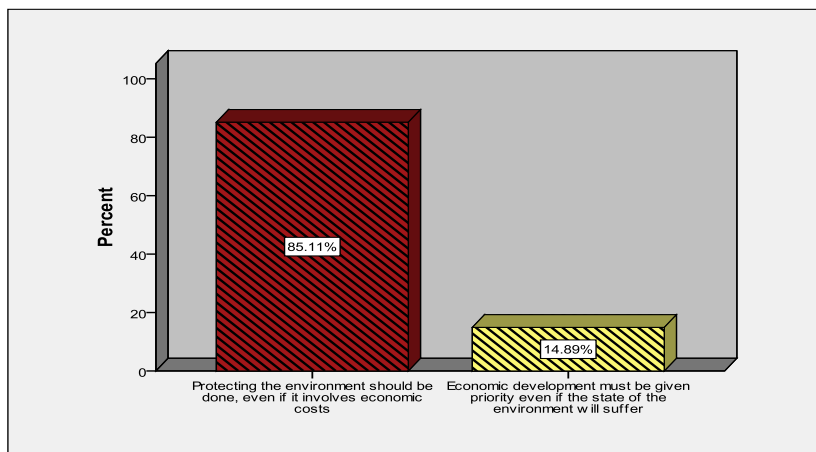


Fig. 15. 2% allocation of income tax to fund environmental

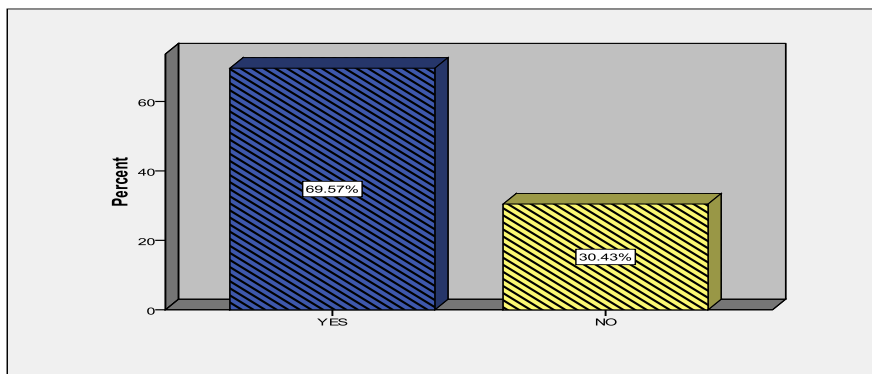


Fig. 16. Monitor risks and environmental problems

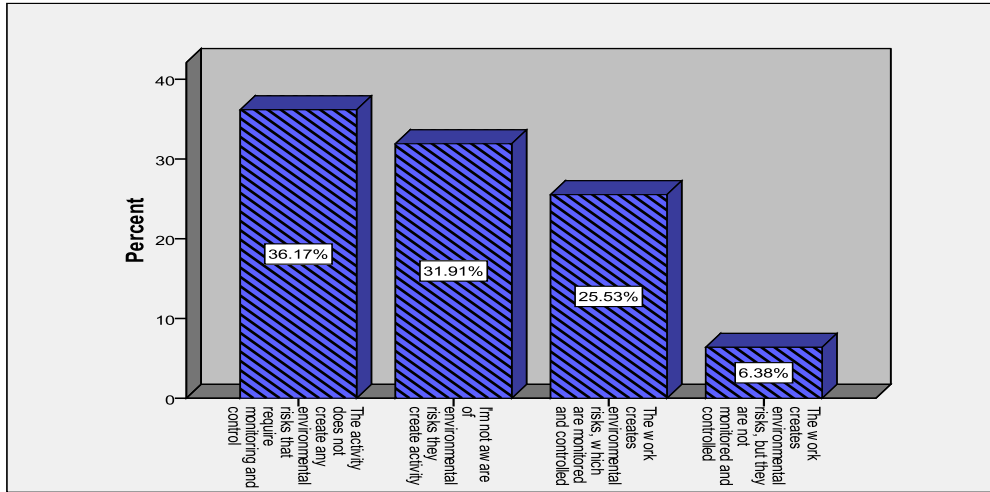


Fig. 17. Measures they have adopted within your organization for Environmental Protection

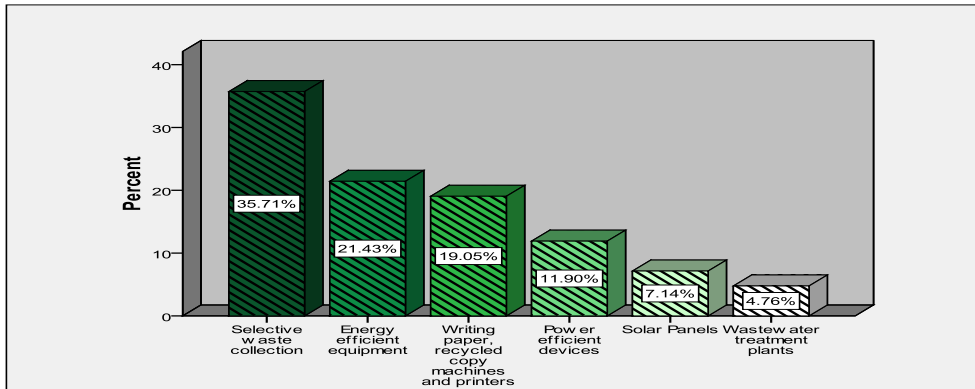


Fig. 18. Existence of a person responsible to management environment

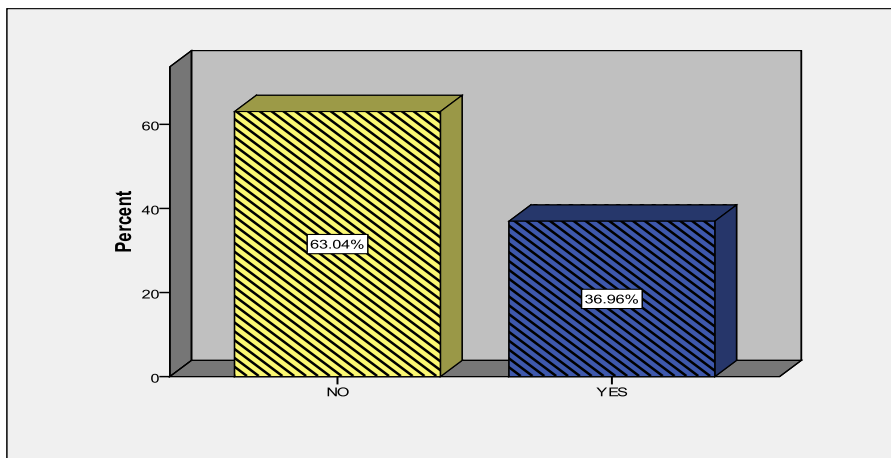


Fig. 19. In developing new products takes into account the durability of the product

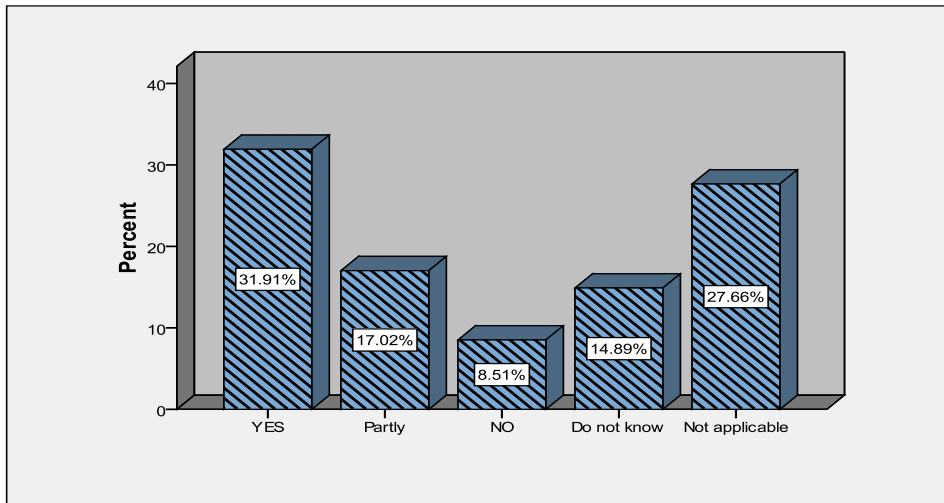


Fig. 20. Social responsibility

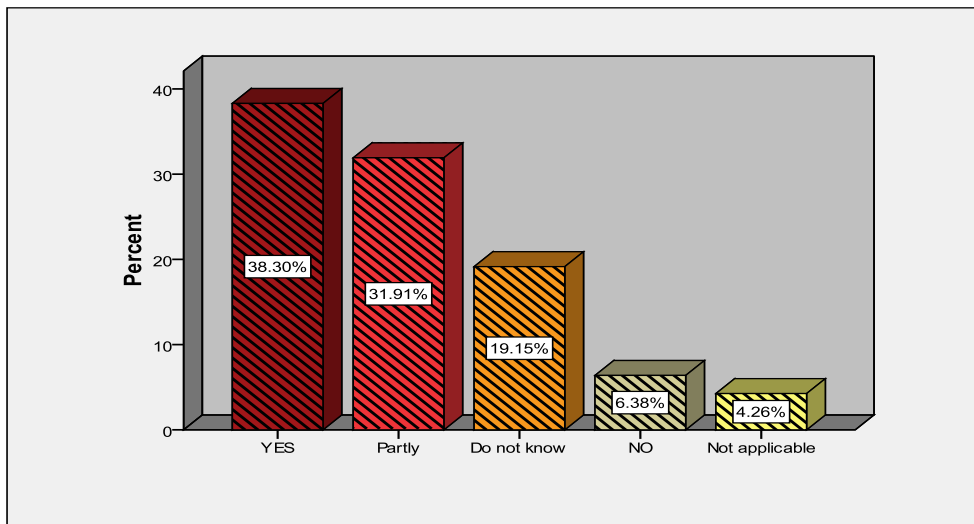


Fig. 22. Organization Profile

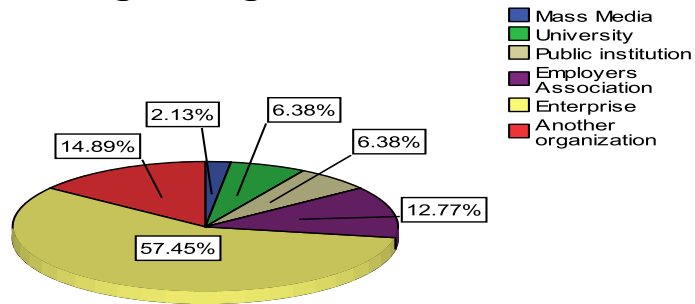


Fig. 23. Age

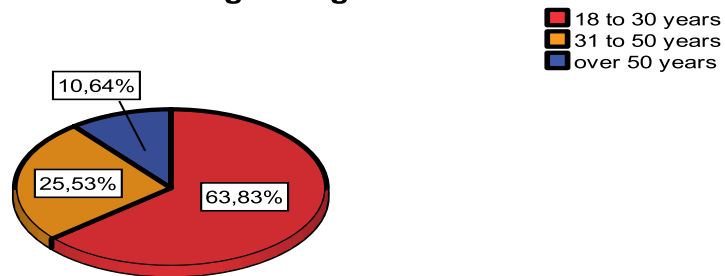
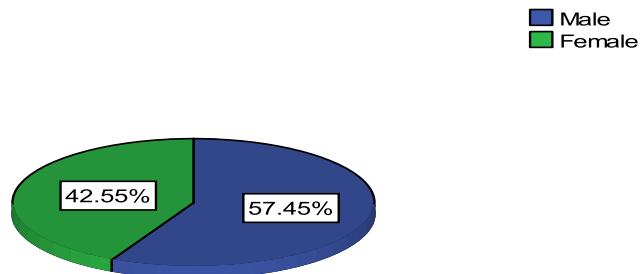


Fig. 24. Gender



Acknowledgement

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The Personnel Fluctuation Phenomenon in Transition from Communism to Capitalism

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Abstract

Purpose - Creating an overview on the evolution of personnel fluctuation phenomenon in capitalist and communist periods and identify a pattern of evolution of the phenomenon in the two periods mentioned.

Methodology/approach - This paper centralizes a theoretical data of the personnel fluctuation phenomenon, supplemented by a case study based on primary and secondary data on the level of staff turnover during communism and capitalism.

Findings – The study draws attention to changes that have occurred in the mentality of employees regarding workplace change and the cyclical event phenomenon in transition from communism to capitalism.

Research limitations/implications – Creating a graphic model for the evolution of the personnel fluctuation phenomenon in capitalist and communist periods. The fact that there are few data on personnel fluctuation in the communist period was a limitation on the conduct of research.

Practical implications – presenting a comparative study on the evolution of personnel fluctuation phenomenon to identify the cyclical evolution of the phenomenon examined, allowing for future estimating evolutionary phenomenon, and therefore taking measures to limit the phenomenon.

Originality/value – This paper explore aspects of the personnel fluctuation phenomenon in different periods of labor market trends and different political regimes, also cyclic manifestation of the phenomenon.

Key words: *personnel fluctuation, communist, capitalist.*

Introduction

The issue of personal fluctuation and the variations that it determines in an enterprise is a theme that was highly approached by authors. The preoccupation of finding a method that will determine the high fidelity of the human resource and the solution for the problems generated by this phenomenon is being studied at enterprise level and national level.

The concept of personal fluctuation is being defined as the abandonment of the job by an employee followed by the necessity of hiring another person for that position. The dimensions of the phenomenon are being determined by using the fluctuation parameter, which represents the percent value of the work force's movement in a specific period of time between different organizations related to the total number of organization members [Joseph Martocchio, Hui Liao and Aparna Joshi].

The formula for this parameter is:

$$I.f. = (F / P) \times 100$$

In which:

F -is the total number of fluctuation determined by the resignations from the organization followed by employment of vacant work places for a certain period of time.

P is the medium number of employees.

The accounting of the fluctuation parameter is influenced by the definition of fluctuation. If in certain technical studies there is no distinction between different

kinds of fluctuation related to the nature of the resignations in an organization, the administrative usage in some countries has imposed a very limited acceptance. In these countries fluctuation is considered to be a negative phenomenon [Armenia Androniceanu].

As far as we are concerned we have adopted the most popular point of view according to which fluctuation, as part of work force's movement, represents the flow of personal between organizations, while migration refers to geographical displacement.

The fluctuation problem is more dramatic as the employer is sometimes in an impossibility of continuing his activity due to the absence of some employees and this is causing money lost (the most damaging effect). In order to maintain his employees and to reduce the fluctuation, the employer is forced to make certain changes in the organization, to adopt certain measures [Oana Bonteanu, Rusu Costache].

The personnel fluctuation phenomenon evolved continuously depending on various factors. One of this factors is players from the labor market mentality. If during the communist period mentality required to the employee to work in the same company until retirement because the job change was cataloged as a disgrace, the capitalist period brings greater freedom of movement in the labor market, job change became a necessity in employee's evolution.

Personnel fluctuation phenomenon before and after the revolution

Studying how the phenomenon evolved personnel turnover during the communist period compared to the capitalist, requires a thorough detail, considering the way the labor market has evolved over the past 20 years. Thus, we can not talk about a capitalist period in general, because it would mean a superficial analysis, this period was marked by several distinct aspects. We can talk about a transition period, including the period before EU accession and the period after EU accession followed by the periods before and during the economic crisis.

We have thus four periods with different characteristics that must be analyzed separately.

Communist period and the begining of transition

During the communist period, the stringency imposed by the political regime has made to reduce the personnel fluctuation in massive movements to industrialized areas. After the revolution, in the period of transition, big companies manufacturing and mining have reduced activity, ex-employees being forced to go to other areas, thereby increasing staff turnover forced the index.

We have here the example of the processing center from Hunedoara. In 1989, the city of Hunedoara counts about 90,000 inhabitants. Since the '50s, the communist regime past the massive industrialization of the area, such as the city became a kind of El Dorado for thousands of people in Moldova and Oltenia, who arrived in large number in Hunedoara. Thus, in the late '80s, the Hunedoara company has around 20,000 employees [Anghelache, C.]. After the revolution, in less than 10 years, Hunedoara falls from economically and socially.

In 2003 the company was sold, and now, still working in this company for about 800 people. Most say that restructuring must be accompanied by alternatives, so that labor force be able to find other jobs quickly.

For most of those who lost their jobs in the company, saving came from the state, which allowed as many former employees to be able to retire around the age of 55 years.

Instead, many young people chose to go abroad. Unofficial statistics show that about 3,000 former employees have been reclassified in Hunedoara and work today in other areas.

Another example is the processing center from Calan. In 1989, there worked about 6,400 employees. Division of the processing center in 12 companies in 1998 resulted in the loss of 5,000 jobs in the city. Today, Calan are about 1,300 jobs, and many people are forced to commute from Deva, Hunedoara or Simeria . And other cities, such as Hateg , Orastie or Simeria are in a similar situation to that of Calan. Industrialized before 1989, the three cities together lost about 15,000 jobs in 20 years. Nothing in the three urban communities were not attracted investors to create new jobs. Moreover, several thousand of the three cities have left Romania and settled in Spain and Italy.

Personnel fluctuation before and during the economic crisis

Before the economic crisis period, the personnel fluctuation phenomenon continues to influence the labor market. A large number of employees leaving the companies, but only some of them go to work at another company in the country. The phenomenon which has extend in this period is the migration, a large number of employees leaving to work abroad. [Table 1]

The period of economic crisis brings a reduction of the phenomenon. Employees have become much more stable in most companies were reduced wages, and gradually reduce the number of posts that are still needed, the markets are in decline, making them no longer have any positive outlook and feel constantly in uncertainty. All this leads to a visible reduction of staff turnover phenomenon. [Table 1]

Process evolution of the personnel fluctuation phenomenon in each of the four periods analyzed are centralized in Table 1 [Table. 1].

The case study and develop new model of evolution of the personnel fluctuation phenomenon in the four periods analyzed

To illustrate the above said we made a case study on three companies, specialized in design, research and production. Following interviews held with managers of these firms, based on the following factors: the average number of employees in the four periods mentioned, and the number of employees who left the company during the periods involved, we collected some data that are centralized in the Table 2.

According to the study, number of employees has been constantly decreasing from one period to another, the number of people who have left the firms analyzed in order to work in another firm, perfectly illustrates the previous theoretical findings.

The research firm, the number of employees has been steadily decreasing [Table 2 and Chart No.1]. During the communist period the number of employees who leave the company to work in another firm was 0 [Table 2, Chart No.1]. In the transition period, when the labor market was characterized by major changes, the number of employees fluctuates is reaching up to the 100 employees [Table 2, Chart No.1]. Next period shows a decrease in the number of employees who leave the company in order to change the workplace to a total of 30 employees [Table 2, Chart No. 1]. During the economic crisis, due to unstable economic situation, people try to keep their job, turnover decreased to 0 people, like the communist period.

The same trend is recorded and analyzed factors in design and manufacturing companies, [Table 2 and Chart No. 2 and Chart No.3.].

Based on the analysis made in the three companies and the theoretical data we have developed a model of evolution of the phenomenon of turnover of personnel in the four periods [Chart No. 4]

Under this model, we see the cyclic evolution of the phenomenon, starting from very low values during the communist period, increasing during the transition period and starting to decline in the period before the economic crisis to get the same situation during the economic crisis.

Based on this model we estimate the increase in scale manifestation of the phenomenon, after the economic crisis.

Conclusions

As discussed above, we made a centralization of the main characteristics that define each period analyzed , and also developed a graphical representation of how the phenomenon evolved personnel turnover during the four periods analyzed, taking into account the main features mentioned.

Communism: Small number of employees who leave work, this is considered a disgrace; fluctuation for major industrial centers; evolution of the phenomenon is kept under control.

Transition: Partial closure of the activity in major industrial centers make personnel fluctuation phenomenon to grow, employees are forced to work in other areas.

Before economical crisis: The phenomenon continues to influence the labor market. A large number of employees leaving the companies, but only some of them go to work at another company in the country. The phenomenon which has extend in this period is the migration, a large number of employees leaving to work abroad.

During the economical crisis: Employees have become much more stable, have low salaries in most companies, is gradually reduced and the number of posts that are

still needed, markets sink further, making them no longer have any positive outlook and feel constantly in uncertainty.

According to the survey, staff turnover phenomenon had a cyclical evolution over the four periods analyzed, recorded similar values communism and the economic crisis periods. The difference is, that if the communist period, the numbers of fluctuating staff were reduced because the political system control every move of the employees, in times of economic crisis, the phenomenon is due to reduced labor market instability, and the fact that employees are insecure place work and no longer afford to leave the company.

Based on observations made during the case study, we could estimate that in the period after the economic crisis, the personnel fluctuation will increase, like the evolution of the transition period analyzed above.

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Research in Personnel and Human Resources Management

Bonteanu, O., and C. Rusu

2009

The organizational variations determined by personal fluctuation in some enterprises from Romania

Table no.1 Centralization of personnel fluctuation phenomenon characteristics in the four periods analyzed

No.	Periods	Characteristics
1.	Communism	<ul style="list-style-type: none"> ○ Small number of employees who leave work, this is considered a disgrace; ○ Fluctuation to the major industrial centers; ○ Evolution of the phenomenon is kept under control;
2.	Transition	Partial closure of the activity in major industrial centers make personnel fluctuation phenomenon to grow, employees are forced to work in other areas.
3.	Before economic crisis	Before the economic crisis period, the personnel fluctuation phenomenon continues to influence the labor market. A large number of employees leaving the companies, but only some of them go to work at another company in the country. The phenomenon which has extend in this period is the migration, a large number of employees leaving to work abroad.
4.	During economic crisis	Period of economic crisis brings a reduction of the phenomenon. Employees have become much more stable in most companies were reduced wages, and gradually reduce the number of posts that are still needed, the markets are in decline, making them no longer have any positive outlook and feel constantly in uncertainty. All this leads to a visible reduction of staff turnover phenomenon.

Table no.2 Centralizing data on fluctuating number of employees and staff in the four periods analyzed, gathered through interviews with managers of three companies (research company, production company, design company)

Company / field work	Communism	Transition	Before economical crisis	During economical crisis
Research				
Employees	320	260	16	6
Employees who left the firm to work in another company	0	100	30	0
Production				
Employees	5000	3400	1800	400
Employees who left the firm to work in another company	0	800	1000	0
Design				
Employees	310	300	21	16
Employees who left the firm to work in another company	0	100	63	0

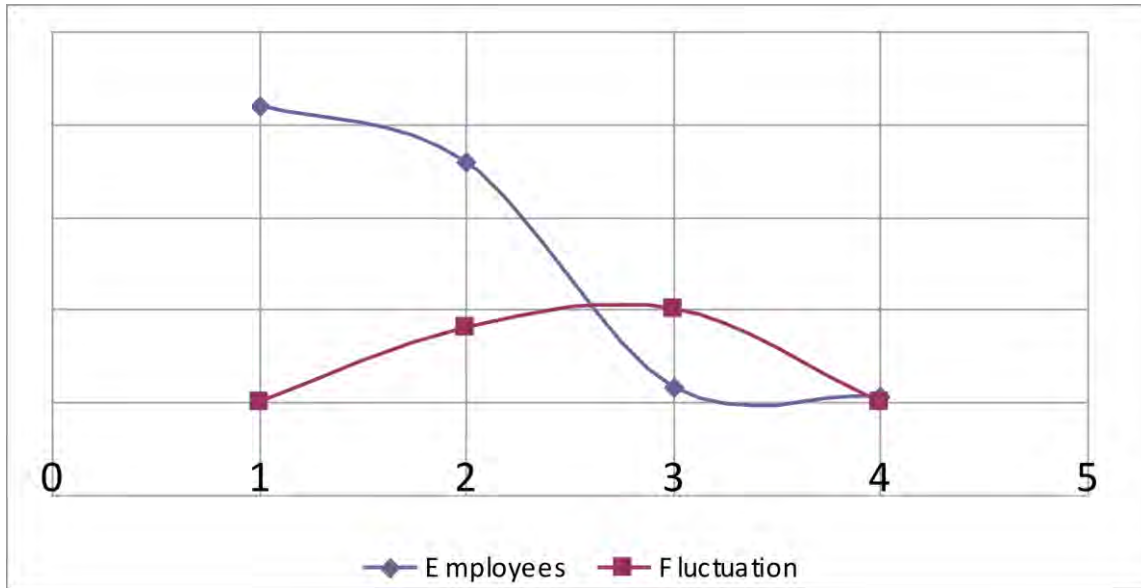


Chart No.1 - Process evolution of the personnel fluctuation phenomenon in the four periods analyzed in a research company

Legend :

- 1 - Number of employees / staff fluctuating during the communist period
- 2 - Number of employees / staff fluctuating during the transition period
- 3 - Number of employees / staff fluctuating before economical crisis,
- 4 - Number of employees / staff fluctuating during economical crisis



Chart No.2- Process evolution of the personnel fluctuation phenomenon in the four periods analyzed in a production company

Legend :

- 1 - Number of employees / staff fluctuating during the communist period
- 2 - Number of employees / staff fluctuating during the transition period
- 3 - Number of employees / staff fluctuating before economical crisis,
- 4 - Number of employees / staff fluctuating during economical crisis

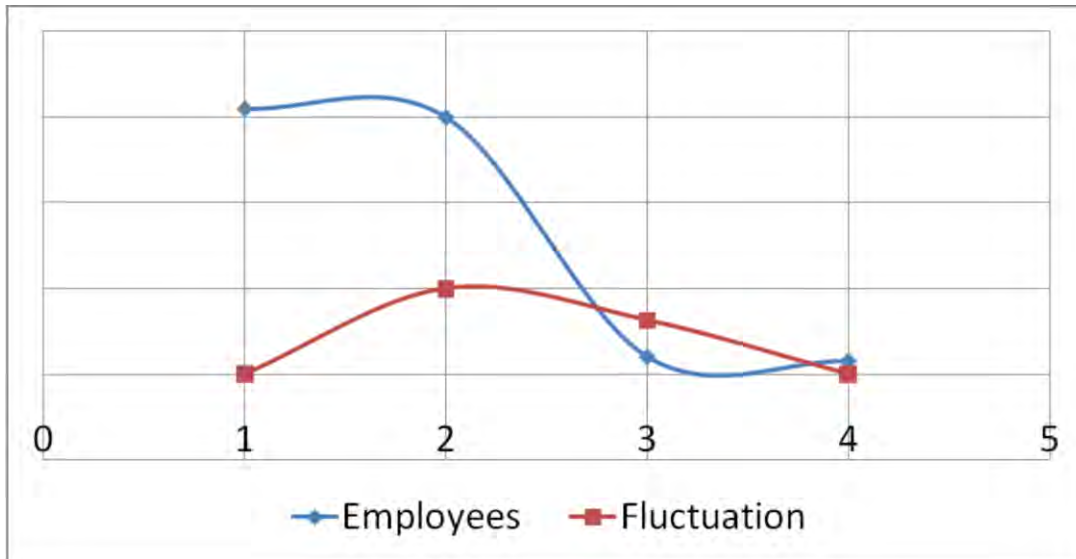


Chart No.3- Process evolution of the personnel fluctuation phenomenon in the four periods analyzed in a design company

Legend :

- 1 - Number of employees / staff fluctuating during the communist period
- 2 - Number of employees / staff fluctuating during the transition period
- 3 - Number of employees / staff fluctuating before economical crisis,
- 4 - Number of employees / staff fluctuating during economical crisis

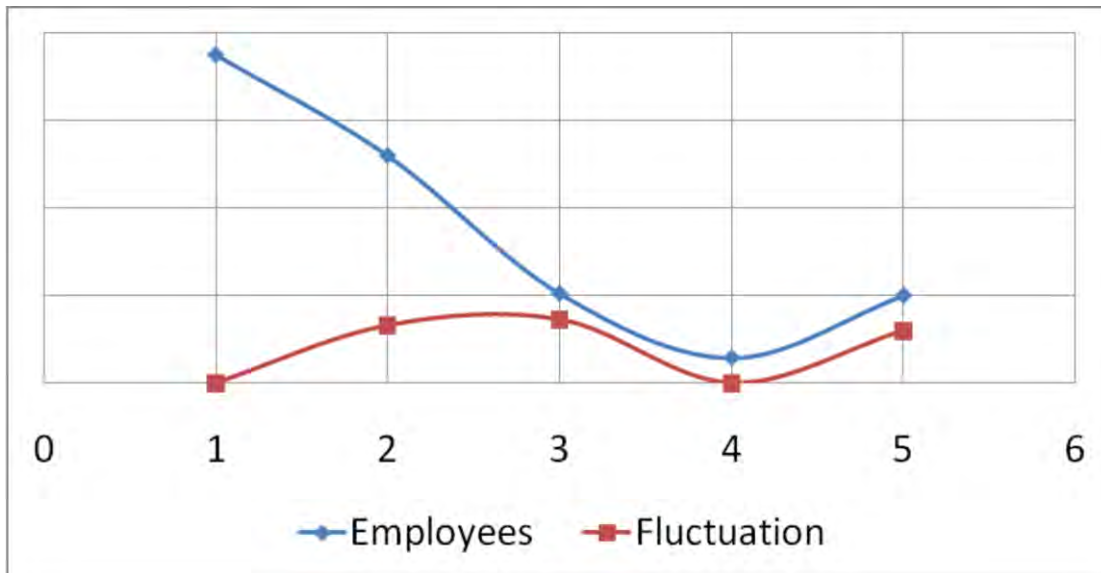


Chart No.4- The model of the process evolution of the personnel fluctuation phenomenon in the four periods analyzed, and estimate for the period after the economic crisis

Legend :

- 1 - Number of employees / staff fluctuating during the communist period
- 2 - Number of employees / staff fluctuating during the transition period
- 3 - Number of employees / staff fluctuating before economical crisis,
- 4 - Number of employees / staff fluctuating during economical crisis
- 5 - Number of employees / staff fluctuating after economical crisis

PLM as a Success Factor of Sustainable Development

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Abstract

Purpose – the paper presents the PLM concept as a success factor of sustainable development and proposes a simple instrument that could assist managers in setting the right PLM objectives for increasing the sustainability perspectives of the organization.

Methodology/approach – the methodology consists of a mapping between a set of PLM objectives and the Global Reporting Initiative's (GRI) Sustainability Performance Indicators grouped under the three pillars of sustainable development (economic, environmental and social).

Findings – a PLM approach allows for a wide range of objectives to be set, bringing financial, time, quality and business improvements. When the right set of PLM objectives is established, the balance between the three components of sustainability is maintained, contributing to the sustainable development of the organization.

Research limitations/implications – as the current undertaking represents a theoretical concept, for validation, a case study within a Romanian SME/company has to be performed in the following research period.

Practical implications – the concept was not yet implemented in practice.

Originality/value – the proposed roadmap, the mapping and presenting PLM objectives from sustainability perspective represent the authors' contribution.

Key words: Sustainable Development, PLM, Product Development.

Introduction: Product Life Cycle – a new perspective

The past years have brought a change in the way manufacturers (and organizations in general) think of their products, resulting in a “rediscovery” of product's life cycle. Until recently, being competitive could be resumed at four main objectives: improve the quality of the products, produce with minimum costs, reduce the time to market and incorporate innovations. As a result of increased environmental awareness of the society, a fifth main objective can be now emphasized, namely considering the environmental impact of products throughout their entire life cycles. In other words, in order to achieve long term competitiveness, sustainability has to be perceived as an imperative. (Brundtland Commission, 1987) defined Sustainable Development as a global ideology which aims at influencing the whole society, in order to ensure “a development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

Products are at the core of any organization whether we refer to the tangible products, or intangible ones (services). The focus on developing sustainable products can only result in an increase in sustainability perspectives of the organization. But sustainability implies thinking long term rather than short term, which further translates into the need of controlling all the aspects regarding products long time after they are out of company's gates. As a result, the products are no longer designed just to meet, or create, a customer need, but they are developed from a stakeholders' perspective. When stakeholders with particular requirements on each stage of the product's life cycle are considered, the result will be a product designed for its entire life cycle.

The topic of Sustainable Development, or Sustainable Product Development has been broadly addressed in research in the past years. (Maxwell, et al., 2003) proposes a method called Sustainable Product and Service Development (SPSD)

which focuses on developing products which are more sustainable in a Triple Bottom Line (TBL) context: balancing economic, environmental and social aspects. According to the aforementioned authors, SPSD represents an evolution of existing sustainable product development approaches such as Design for X or Eco-design. (Gehin, et al., 2008) proposes a tool (REPRO² for Remanufacturing PROduct PROfiles) to implement sustainable end-of-life strategies in the product development phase based on the 3R strategies: Reuse, Remanufacture and Recycle. (Komoto, et al., 2006) proposes a life cycle simulation technique for product's circulation in the markets over their entire lifetime with a discrete simulation technique. (Niemann, et al., 2009) extends the concept of product's sustainability to the sustainability of its life cycle, introducing a five stages methodology for developing sustainable product life cycles: identifying the proper motivation for design or redesign of PLC, identifying the fields of action in life cycle design, creating life cycle scenarios based on prognosis, developing life cycle concepts and life cycle concept assessment and selection. In the new paradigm "Factory as a product", (Constantinescu, et al., 2009) extends the concept of Product Life Cycle to Factory Life Cycle and proposes a reference model for factory engineering and design.

PLM: Concept overview, Rationale, Challenges and benefits

Concept Overview

Product Lifecycle Management (PLM) is the business activity of managing an organization's products throughout their entire life cycles, from the very first idea for a product all the way through its disposal or retirement, in the most effective way (Stark, 2005).

According to the University of Michigan's PLM Development Consortium (2003), "PLM is an integrated, information driven approach to all aspects of a product's life from its design inception, through its manufacture, deployment and maintenance and culminating in its removal from service and final disposal."

PLM as a concept cannot be limited to a particular PLM solution (system), as it actually represents a holistic business activity including, or addressing, many components, such as: products, processes, organizational structure, people, methods, information structures, information systems, etc. As can be anticipated, each of these individual components can be supported by tools and methods that facilitate their development and management, but a PLM approach brings them together in an integrated perspective (Fig.1.).

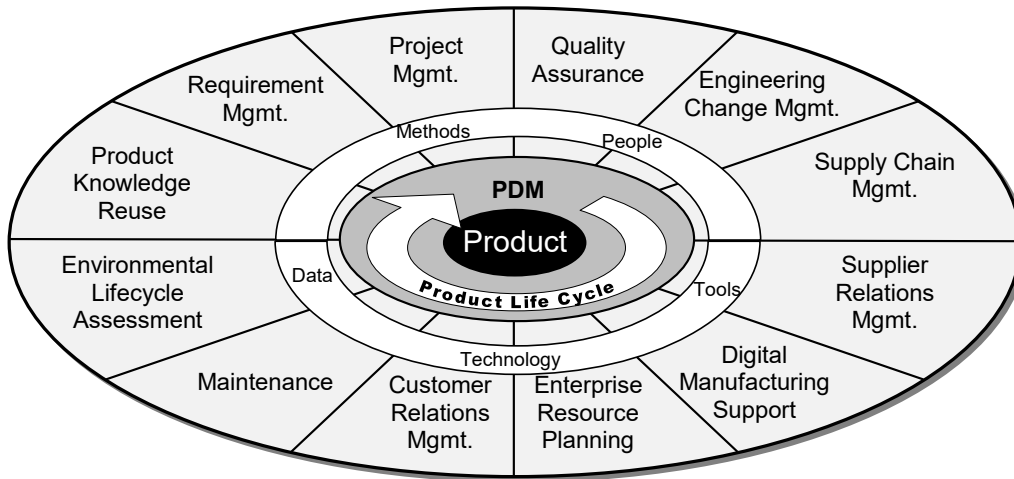


Fig.1. PLM components

At the core of PLM, as its name implies, stands the product and its associated information (managed by Product Data Management systems). This means that the focus will be on the product and not on the customer (as in Customer Relationship Management - CRM), or the supply chain (as in Supply Chain Management - SCM), or on enterprise resources (as in Enterprise Resource Planning - ERP). PLM is focused on maximizing the value of current, or even better, of future products. Considering that all the activities are organized for the successful delivery of products, it can be stated that PLM incorporates all the above mentioned systems. PLM is a “way of thinking” rather than a tool and can be implemented in companies of any size because, in all cases, products, product data, product development or support processes have to be managed and several data must be exchanged between various stakeholders.

Rationale for PLM

The need for PLM emerged basically from the new orientation of manufacturers (and organizations in general) towards the life cycle of products and from the pressures they have to face due to the latest trends in product development.

There are two major arguments for improving products' life cycles: ecological and economical motivation. The main objective for ecological improvement of a product is to decrease the global impact on the environment (energy consumption, emissions, waste) throughout its life. The economical motivation implies increasing the profit generated by the product over each stage of its life cycle. This growth could be mainly achieved in two ways: either by decreasing costs and/or increasing incomes, or by increasing the sales volumes while offering a product which can be operated at lower costs than the ones of competitors. When choosing the second option, auxiliary methods for the product to generate incomes throughout its life should be found (e.g. support services). Even if the two motivations seem antagonistic, they are strongly dependent on one another. Without promising economic success (or at least neutrality), any action aimed at improving environmental performance will be hard to implement. On the other hand, ecological objectives such as resources efficiency or components reuse can bring important financial advantages. Furthermore, such ecological objectives prove to be of interest for more stakeholders, like: organization (as a whole) by decreasing the costs, customers by reducing the selling price and the society by a decrease of impact on the environment (Stevels, 2000).

The last decade shown a rapid development of global economy characterized by the free trading of products. The implications are at least twofold: on one hand there is a wider market for the producers while on the other hand the competition for market share became fiercer. In order to survive in a highly competitive and turbulent environment, organizations are forced to come out with better products that incorporate more functions, but in the same time at the lowest price and with shortest time-to-market (Yang, 2007).

The extension of producers' liability over the entire life span of products and the regulations in the field of environmental protection (WEEE, RoHS, ELV, etc.) brought upon new challenges. If managed properly, these regulations can prove to be just another income resource for the organization, when proper end-of-life strategies are envisioned.

One of the implicit objectives of each organization is to cut costs. Having most of the costs optimized, one of the means to achieve this objective is to optimize the resources consumption over the life span of the product, which further translates into the need for proper mechanisms to support product lifecycle management.

Companies now focus on their core competencies, which means that they mostly subcontract other activities to companies which are able to provide them at more competitive price. Past years shown a trend of integrating these suppliers into the business chain of the organization (same trend can be observed with distributors). Consequently, instruments to keep outsourced activities under control were required.

On top of all these, Fig.2. shows the current trends in product development which emphasize furthermore the need for holistic approaches which allow the management of products throughout their life cycle.

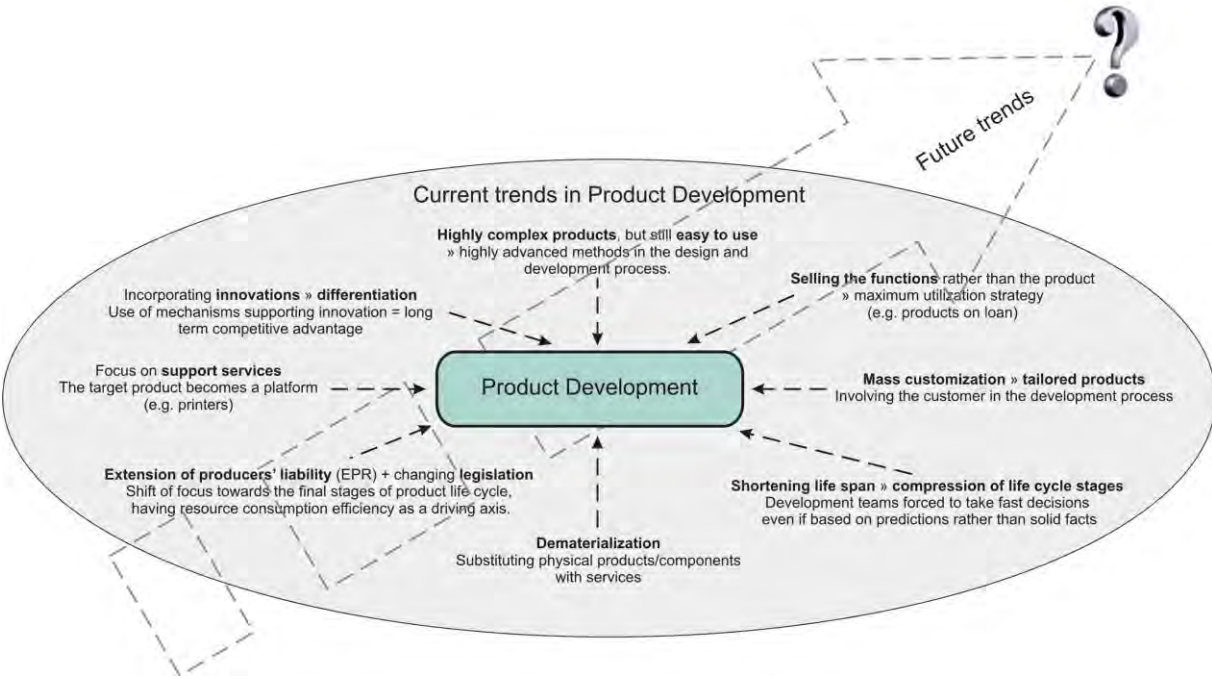


Fig. 1. Current trends in Product Development

Challenges and advantages

Embracing the PLM philosophy is a decision taken at an organization's level. Such a decision should only be made after estimating the implications for the company and balancing these with the potential benefits of this decision. The following challenges, considered from a business perspective, not from implementing a particular PLM solution perspective, can be identified:

- Implications at organizational scale with considerable resources involved;
- Slow process which requires considerable efforts and whose benefits are not immediately visible;
- Several changes that must be made to the current processes and activities within the organization;
- Human resource's reluctance to change (successful implementation is subject of adequate change management);
- Decisions that can affect the entire business, such as partnerships or integrating upstream and downstream organizations into the business model;
- Multiple data sources and formats (the integration challenge);
- Information sharing and security aspects;
- Bringing departments (and/or various stakeholders) together in functional teams focused on the product.

The advantages brought by PLM implementation can be grouped as following:

- Benefits along the life cycle (e.g. better management of customer requirements, developing products faster, creating more innovative ideas, effective maintenance scheduling, delivering the product at the required time in the required place, etc.);
- Increasing revenues (e.g. increasing the number of customers by developing and supporting new products, increasing the product portfolio, increasing the range of auxiliary services, increase the sales volume by better management of enhancements, improvements, versioning, etc.);
- Cutting costs (e.g. reduce costs related to: material and energy consumption, product quality, maintenance, stocks, overhead, product development, etc.);
- Logical management of tasks in each stage of the life cycle (e.g. managing product portfolio and associated data, providing Design Rules, providing knowledge data base, defining End-of-Life (EOL) strategies, simulating product behaviour, etc.);
- Managing product data better;
- Other benefits, such as: keeping more product options available closer to the launching time, better use of company knowledge, enabling mass customization, improve quality of customer service, etc.

Implementation aspects

Implementing PLM philosophy must be a top management decision, as it has implications on every level of the organization and it is time and resources consumer (financial resources, human resources, etc.). The first step in implementing PLM is defining the PLM Vision, followed by establishing the PLM strategy. With these two milestones achieved, the implementation at organizational level can start.

The PLM Vision represents a high-level conceptual description of a company's life cycle activities in the future, or the best possible forecast of the desired future activities. This vision should not be a stand-alone one, but it should be included or correlated with the global vision of the company.

Once the Vision is established at conceptual level, there is a need for concrete plans of action to turn this envisioned picture into reality. This is the role of the PLM Strategy which defines how the PLM objectives will be achieved and how resources will be organized, used and managed. All further planned activities will be subordinated to this strategy. A well-defined strategy will assure company's orientation, will offer the support for meeting the PLM Vision, will encourage the efficient use of the resources for meeting PLM goals and will enable for planning decisions to be taken in a coherent way.

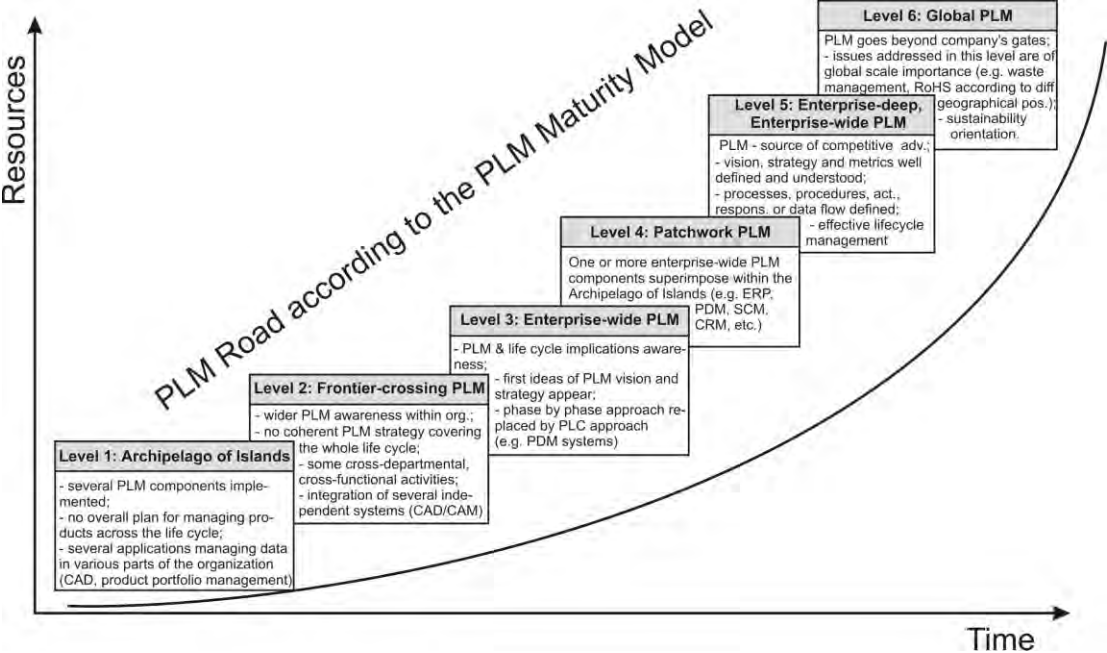


Fig. 3. Levels of implementing PLM within organizations

As such an implementation requires considerable efforts and resources, it is expected that companies could choose different levels of implementation, as given by the six-level PLM Maturity Model (Stark, 2007). This option could be preferred also because a gradually implementation process has more chances of success than an all-in-one step implementation. As seen in Fig. 3., only from Level three on, PLM receives a strategic importance within organization and objectives are set accordingly. Most of the companies are considered to have reached, or being close to Level four. Next section will only refer to those companies which include PLM in their overall business strategy.

Improving organization's sustainability by means of PLM

Organizations operate within a Triple Bottom Line (TBL) context: economic, environmental and social one. In order to ensure sustainability, a balance between these three pillars should be achieved. One cannot refer to sustainability if only the economic, or social, or environmental perspective is addressed. Companies, whose

focus is product development, should also follow this rule in order to propose a sustainable product development, and further on, sustainable development.

The PLM approach usually offers a wide range of benefits if the proper objectives are set. As shown in Appendix 1, the benefits that the implementation of PLM will bring to an organization, can be attributed to four main areas: financial performance, time reduction, quality improvement and business improvement (Stark, 2007). The objectives that can be set within these four areas are, at some extent, endless. When the business principle applied is that of stock exchange, then most of the objectives will be alligned for assuring only the financial performance, thus not having as a result sustainability. In other words, when choosing from what it seems like endless oportunities, guidance is needed for setting the right objectives.

For this purpose, the authors propose a methodology based on a mapping between the PLM objectives set and the Performance Indicators given by the G3 Guidelines, the cornerstone of the GRI Sustainability Reporting Framework. According to (GRI, 2010), these indicators should be used as a basis for annual reporting by each organization regardless of size, sector or location. The abovementioned indicators are grouped into six categories: Environment, Economic, Society, Human Rights, Labour Practices & Decent Work and Product Responsibility. The last four categories can be considered as subcategories of the Social sustainability pillar. A complete description of these performance indicators can be found in (GRI, 2010). The roadmap for this methodology is presented in Fig. 4.

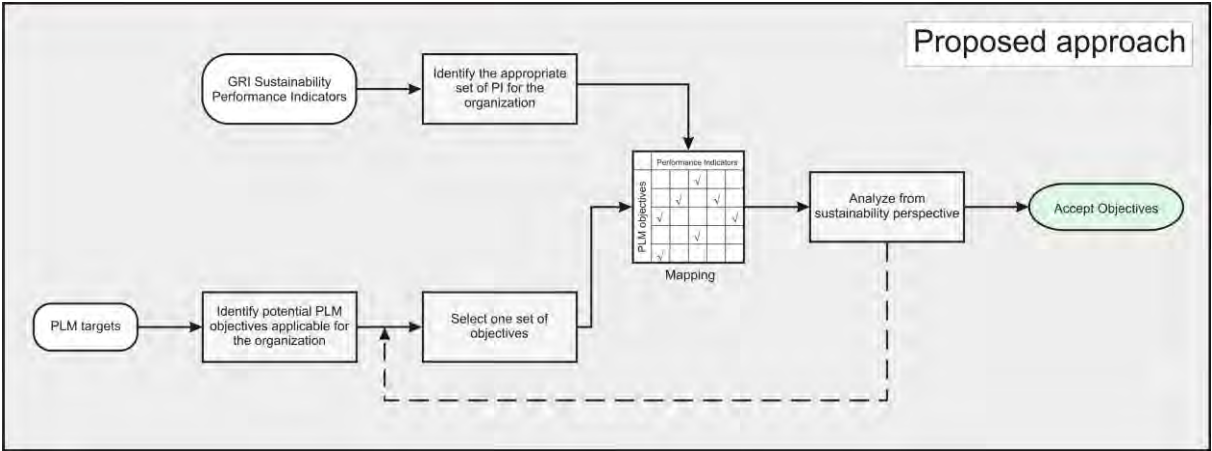


Fig. 2. Proposed methodology for determining the PLM objectives adequacy with respect to sustainable development

From the large number of targets and objectives associated with PLM, the potentially applicable ones within the organization are selected, generating a set of objectives. Following, the set of sustainability indicators which is appropriate for the organization will be selected from the GRI sustainability indicators. For the purpose of exemplification performance indicators given in Appendix 2 were chosen.

PLM objectives / targets	Economic				Environment						Social					
	EC1	EC2	EC6	EC9	EN1	EN2	EN5	EN6	EN18	EN22	EN26	S01	S08	PR1	PR5	PR7
Increase the value of product portfolio	✓			✓												
Increase revenues through faster product introduction	✓															
Increase revenue through wider product range		✓	✓											✓		
Increase revenue through extended product life				✓												
Increase revenues through new services on existing products				✓												
Reduce costs due to recalls, failures etc.						✓							✓			✓
Reduce cost of material and energy	✓			✓	✓	✓						✓				
Reduce project cost overrun							✓	✓			✓					
Reduce product development costs	✓		✓													
Reduce time for maintenance	✓			✓												
Reduce engineering change time		✓	✓													
Reduce defects through upstream and downstream collaboration				✓									✓			
Reduce customer complaints												✓		✓	✓	✓
Reduce product liability costs				✓								✓	✓	✓	✓	✓
Increase innovation rate	✓	✓			✓	✓	✓									✓
Increase the part reuse factor				✓	✓	✓		✓	✓	✓						
Increase recycled parts usage				✓	✓	✓			✓	✓						
Increase product traceability												✓				
Increase number of concepts tested		✓														
Ensure resources optimization	✓				✓			✓								
Ensure configuration conformity				✓								✓	✓	✓	✓	✓
Total correlated objectives	25				24						20					

Fig. 5. Mapping between business objectives focused on Product Development and GRI Sustainability Performance Indicators

The proposed mapping (Fig. 5.) can be used for choosing the PLM objectives in such a way that they support the organization in meeting the sustainability performance indicators. If achieving one objective will increase the chances of meeting one or more sustainability performance indicators, than it is considered that these two can be connected (positive correlation, marked with “✓”). Further, the score for each of the three sustainability components is calculated as a sum of all interdependencies between objectives and performance indicators. The results for the proposed example are given in Fig. 6.



Fig. 3. Contribution of PLM objectives on each component of sustainability

Such a representation can give a proper idea about organization's orientation towards sustainability. Sustainability can be pursued only if the objectives are set accordingly. If the differences (in percentage) between economic, environmental and social aspects are too big it means that the balance required by a sustainability approach cannot be assured. As a result, auxiliary objectives that could help improving the underdeveloped component should be chosen.

Conclusions and future work

The orientation of developers towards the life cycle of the products brought upon the need of effective lifecycle management. Product Lifecycle Management, perceived as a way of thinking rather than a specific IT tool, can bring significant benefits for organizations that choose to implement it. PLM allows for the definition of ambitious objectives in areas like: financial, time, quality and business improvement. From sustainability perspective, the objectives that also ensure the balance between economic, environmental and social components should be chosen. For this purpose, tools like mappings between business objectives and globally acknowledged sustainability performance indicators prove to be useful. The intuitive approach proposed by the authors can assist managers in setting the right PLM objectives for increasing the sustainability perspectives of the organization. As future work, a use-case scenario within a Romanian SME/company has to be conceived and implemented. The selection of the SME will be made based on criteria such as: industrial sector, type of products, geographical region, etc. The results obtained from this validation scenario will be further used for refining the method.

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Appendix 1. Specific objectives grouped into four areas of benefits given by a PLM approach

Area of improvement	Targets (examples)
Financial area	Increase the value of product portfolio by ...
	Increase revenues through faster product introduction by ...
	Increase revenue through wider product range by ...
	Increase revenue through extended product life by ...
	Increase revenues through new services on existing products by ...
	Reduce costs due to recalls, failures etc. by ...
	Reduce cost of material and energy by ...
	Reduce project cost overrun by ...
Time reduction	Reduce product development costs by ...
	Reduce project time overrun by ...
	Reduce time for maintenance by ...
	Reduce engineering change time by ...
Quality improvement	Reduce defects through upstream and downstream collaboration by...
	Reduce customer complaints by ...
	Reduce product liability costs by ...
Business improvement	Increase innovation rate by ...
	Increase the part reuse factor with ...
	Increase recycled part usage by ...
	Increase product traceability by ...
	Increase number of concepts tested by ...
	Ensure resources optimization by ...
	Ensure configuration conformity by ...

Appendix 2. Excerpt from GRI Sustainability Performance Indicators (available at: <http://www.globalreporting.org/ReportingFramework/ReportingFrameworkDownloads/G3GuidelinesIndividualDownloads.htm>)

- **EC1:** Direct economic value generated and distributed;
- **EC2:** Financial implications and other risks and opportunities for the organization’s activities due to climate change;
- **EC6:** Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation;
- **EC9:** Understanding and describing significant indirect economic impacts, including the extent of impacts;
- **EN1:** Materials used by weight and volume;
- **EN2:** Percentage of materials used that are recycled input materials;
- **EN5:** Energy saved due to conservation and efficiency improvements;
- **EN6:** Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as result of these initiatives;
- **EN18:** Initiatives to reduce greenhouse gas emissions and reductions achieved;
- **EN22:** Total weight of waste by type and disposal method;
- **EN26:** Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation;
- **S01:** Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities;
- **S08:** Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations;
- **PR1:** Life cycle stages in which health and safety impacts of products and services are assessed for improvement;
- **PR5:** Practices related to customer satisfaction, including results of surveys measuring customer satisfaction;
- **PR7:** Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.

Modern Critical Infrastructures Management Concept: Business Continuity vs. Social Responsibility

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Abstract

Purpose - We are all witnessing a major financial crisis; the banking system is a critical infrastructure worldwide.

Findings – The effects of the crisis led to a reverse phenomenon of critical infrastructure in nationalization of leading banks in the United States, Germany and United Kingdom in order to ensure economic stability of those states.

Methodology/approach - The partnership between Government and critical infrastructure operators, the risk-based analysis, the evaluation and investment interdependencies should be key-issues in the strategic vision for the states that aim sustainable development.

Research implications - The two concepts are in most cases known and defined correctly, the real issue is that between entities governed by the two concepts are sufficiently strong synergies that should lead to a risk management proactively

Practical implications - Our objectives are to identify the most important issues about risks and threats and critical business processes, in order to implement clear procedures, safety and security measures.

Originality/value –Integrated security management and identification of risks are particularly important in strategies for protecting citizens, taking into account the negative impact it may have partial or complete disruption of activity of critical infrastructure.

Key words: risks, critical, business

Introduction

Given the decrease of the growth of global economy in 2009, the worst development since the end of the Second World War, the important growth in unemployment, the escalating crime phenomena and manifestations of terrorism, it is predictable a resurgence of social tensions and economic with great impact in all sectors of the global economy

Globally, traditional democracies allowed private organizations to own a critical infrastructure, the government assuming the roles of observation, control and regulation. The importance of private management in terms of ensuring economic efficiency is proved by the results obtained during years by these companies

A management team from a private company focused on maximizing profits, but what happens when ensuring safety and security? Should we deal with a company owning critical infrastructures in the same manner as any Ltd organization? Does the management team acknowledge the social implications?

These are only some of the questions that may support the hypothesis of a closer partnership between the private field and state authorities.

Concepts

The present paper takes into consideration both Corporate social responsibility and business process continuity when operating critical infrastructures. We emphasize what happens when one concept weights more than the other and how this is affecting the whole organization and the citizens.

Critical infrastructures are physical or virtual systems and assets so vital to the nation that their incapacitation or destruction would have a debilitating impact on national and economic security, public health, and safety. These systems and assets—such as the electric power grid, chemical plants, nuclear facilities, water treatment facilities, dams, transportation systems — are essential to the operations of the economy and the government. If vulnerabilities of these infrastructures are exploited, critical infrastructures could be disrupted or disabled, possibly causing loss of life, physical damage, and economic losses.

Social responsibility is essentially a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment. At a time when the European Union endeavors to identify its common values by adopting a Charter of Fundamental Rights, an increasing number of European companies recognize their social responsibility more and more clearly and consider it as part of their identity. This responsibility is expressed towards employees and more generally towards all the stakeholders affected by business and which in turn can influence its success.

These developments reflect the growing expectations that European citizens and stakeholders have of the evolving role of companies in the new and changing society of today. This is in line with the basic message of the Sustainable Development Strategy for Europe agreed at the Goteborg European Council of June 2001, that in the long-term, economic growth, social cohesion and environmental protection go hand in hand.

Many factors are driving this move towards social responsibility:

- new concerns and expectations from citizens, consumers, public authorities and investors in the context of globalization and large scale industrial change;
- social criteria are increasingly influencing the investment decisions of individuals and institutions both as consumers and as investors;
- increased concern about the damage caused by economic activity to the environment;
- transparency of business activities brought about by the media and modern information and communication technologies.

A business process is a collection of activities designed to produce a specific output for a particular customer or market. It implies a strong emphasis on how the work is done within and organization, in contrast to a product's focus on what. A process is thus a specific ordering of work activities across time and place, with a beginning, an end, and clearly defined inputs and outputs: a structure for action.

Recently, business processes have shown the following four trends:

- they are becoming more important;
- they are subject to frequent changes;
- they are becoming more complex and
- they are increasing in number.

Therefore, a business process operating system is needed for managing, controlling and coordinating business processes. Workflow management systems are such systems. Workflow is the automation of a business, in whole or part, during which documents, information or tasks are passed from one participant to another for action, according to a set of procedural rules.

A business continuity plan is a collection of policies, procedure, protocols and information that is developed, compiled and maintained in readiness for use in the event of a business interruption. The BCP outlines the steps your organization needs to take in order to quickly resume service delivery. Having the BCP in place before the business interruption occurs is critical; otherwise, your organization may not be able to respond quickly enough to prevent service interruption.

Benefits of Business Continuity Planning

- BCP helps organizations fulfill their moral responsibility to protect employees, the community and the environment.
- BCP facilitates compliance with regulatory requirements of federal, state and local agencies.
- BCP enhances an organization's ability to reduce financial losses, regulatory fines, loss of market share, damages to equipment, or disruption to service delivery in the event of a business interruption.

Social responsibility

Companies themselves face the challenges of a changing environment in the context of globalization and in particular the Internal Market, they are increasingly aware that corporate social responsibility can be of direct economic value.

Although the prime responsibility of a company is generating profits, companies can at the same time contribute to social and environmental objectives, through integrating corporate social responsibility as a strategic investment into their core business strategy, their management instruments and their operations.

Where social responsibility is a process by which companies manage their relationships with a variety of stakeholders who can have a real influence on their license to operate, the business case becomes apparent. Thus, it should be treated as an investment, not a cost, much like quality management. They can thereby have an inclusive financial, commercial and social approach, leading to a long-term strategy minimizing risks linked to uncertainty. Companies should pursue social responsibility internationally as well as in Europe, including through their whole supply chain.

In its position paper 'Releasing Europe's employment potential: Companies' views on European Social Policy beyond 2000' UNICE (Union of Industrial and Employers' Confederations of Europe) has stressed that European companies see themselves as an integral part of society, as they act in a socially responsible way; consider profits to be the main goal of the company but not its only 'raison d'être', and opt for long-term thinking on strategic decisions and investment.

Our analysis takes as its starting point the assumption that companies have decided to undertake some social responsibility activity, and are contemplating which tools or practices to adopt, it is nonetheless important to note that there are obstacles to knowing about social responsibility and choosing to take a social responsibility approach at all – and this lack of knowledge, know-how and awareness, or lack of clear benefits for a company of social responsibility, is a big obstacle for many companies.

Some tools and practices are not well known. In other cases, the tool or practice may be hard to distinguish from others with similar names or addressing similar needs. Some tools and practices are widely endorsed by a variety of organisations. Some

are backed by regulation or require independent scrutiny of some kind. Some involve a relatively small effort to apply, some involve a great deal of investment or time. Some include a simple and successful way of communicating with customers, others involve providing dense technical information suitable for more specialist audience – in these cases, it is particularly important to know who you want to communicate with and to choose appropriate ways of doing this. It can be a challenge to make a choice.

The lack of commonly defined expectations, in many areas, can compound this challenge. Time and investment required to implement social responsibility concept

As noted above, some practices and tools may require a level of investment (financial, staff time) which either is, or appears to be, a barrier for some organisations. In these cases, the organization may decide either to not make efforts to improve its performance in that area, or to do so in a way which is not formally recognised by outside bodies or does not have a name and recognised methodology. This option may reduce the organisation's access to others' experience and support and its ability to share costs with peers, but may be chosen because it is deemed to suit the organisations' capacities.

Some practices and tools maximise stakeholder credibility, respond to calls for accountability, and minimize blind spots, by requiring organisations which adopt them to examine a fixed set of issues in a fixed way. This may mean that some organisations find them unsuitable for their own situation. This is particularly the case when the organisation is different from the organisations which were envisaged or involved when the tool was designed or the practice developed. It may also be an obstacle when the company has divisions or operations in different countries, where local circumstances and the expectations of local stakeholders may be very different from the location where the tool or practice originated.

Business Continuity

Business Continuity has a number of equivalent titles – the key ones being business recovery management, business recovery planning and business continuity planning. The names suggest the central concern: planning to recover from a disruption to the normal functions of organization.

In this case any unexpected interruption to a critical business process could have a significant impact on an organisation and, in extreme cases, the survival of business may even be threatened.

All organisations will face some sort of business crisis event sooner or later, some of which may be high profile, but the majority will, more likely, be less dramatic but nevertheless traumatic for all concerned. Furthermore, Government and Regulators try to implement very stringent requirements on organisations to demonstrate that they have effective business continuity arrangements in place.

That's why is necessary the assessment of an organisation's current business continuity arrangements and identifies corrective actions that ensure maximum readiness and compliance with best practice standards

As a conclusion all the procedures and support actions of business continuity or social responsibility are required to ensure that organisations can meet their obligations to stakeholders, regulators and customers [6].

Conclusions

We are all witnessing a major financial crisis; the banking system is a critical infrastructure worldwide. The effects of the crisis led to a reverse phenomenon of critical infrastructure in private transition namely the nationalization of leading banks in the United States, Germany and United Kingdom in order to ensure economic stability of those states.

The next day, we can expect an energy crisis, a crisis in transport, a shortage when ensuring people with drinking water or food. In such circumstances states can no longer afford to have a reactive approach and try to save these vital systems not only in critical times by taking "paternalistic" measures.

The partnership between Government and critical infrastructure operators, the risk-based analysis, the evaluation and investment interdependencies should be key-issues in the strategic vision for the states that aim sustainable development

In case of crisis that directly threaten critical infrastructures, the same situation represent a clear case of Business Continuity for the private operator and a situation of social responsibility for the authorities.

The two concepts are in most cases known and defined correctly, the real issue is that between entities governed by the two concepts are sufficiently strong synergies that should lead to a risk management proactively so as to avoid the coming crisis due to system failures or due to external factors.

Our objectives are to identify the most important issues about risks and threats and critical business processes, in order to implement clear procedures and safety and security measures and to disseminate this information to integrated emergency management at European / national / regional / local, so that the "system" able to cope with disturbances and return to the initial stage in the shortest time and with minimum losses. Security management and identification of risks are particularly important in strategies for protecting citizens, taking into account the negative impact it may have partial or complete disruption of activity of critical infrastructure.

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Cultures of Godfathers
The Role of Paternalistic Leadership in Changing
Organizational Cultures in Transition Economies: a
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Abstract

The objective of the article is to examine the degree to which national culture and/or organization sector are influencing factors in organization culture change and what is the role of leadership in that process. In order to analyze these issues a review of the literature was conducted. The subsequent hypothesis was then tested on a sample of mainly Northern-Hungarian and Transylvanian Romanian companies and organizations to establish whether there was a basis for conducting further research concerning other characteristics, such as the culture-changing role of the leader. Based on the empirical findings significant differences could be traced in the Hungarian and the Romanian sample regarding the economic, social and corporate aspects of the cultural change process. Despite the differences a clear leadership phenomena occurred in both cultural samples, namely the figure of the paternalistic leader as a well-accepted type in times of transition. The study provides a basis for further research on the role of paternalistic leadership in transition economies as a social and organizational heritage of the past or a change agent providing security for organization members.

Keywords: *change, organizational culture, paternalist leader*

Introduction

There have been many attempts happened since the social-economic changes in the post-communist system to capture the changing culture of Hungarian organizations. These studies either demonstrated the current situation as a snapshot (Branyicky, 1989; Máriás, 1989; Hofmeister- Bauer, 1995; Simon-Davies, 1995; Jarjabka, 2002), or focused on the challenges of collaboration in organizations of different cultural background (Child és Markóczy, 1993; Meschi és Roger, 1994; Poór, 1995; Gaál-Szabó, 1996, Primecz-Soós, 1999). Other authors defined the characteristics of subcultures of Hungarian organizations (Bokor, 2000). Detailed studies were also intended to trace the change process of strategic consciousness and the methods of strategic planning. (Balaton, 1994; Balaton, 2003a)

The most recent and internationally comparative empirical studies were carried out in the framework of the GLOBE project (Brodbeck and Frese et al., 2000) which provides a firm ground for further discussion of Eastern-European and specifically Hungarian cultural characteristics. (Bakacsi-Takács, 1997; Bakacsi, 1999; Bakacsi et.al, 2002; Karácsonyi, 2006; Toarniczky A, 2006)

This study intends to capture the change process of organizational culture. An empirical model and a related questionnaire served as the basis of this empirical study. The survey was first carried out in Hungary, specifically in the Northern-Hungarian region, which used to be the centre for heavy industry in the communist era. We assumed that the features of cultural change would be more evident in such social-economic environmental situations. The survey was then extended to regions with the same background in the neighbouring countries. (Romania, Slovakia, Ukraine). Among these, the results of the Romanian survey were validated for statistical comparison with the Hungarian one.

First the model and its theoretical framework is introduced, followed by the primary analysis of the Hungarian survey and the comparison with Romanian results. The

final part shows the results of the secondary analysis as typical phenomena of cultural changes in the given samples.

The research model

Based on the theoretical analyses (Sathe, 1985; Schein, 1992; Trice and Beyer, 1993; Nahavandi and Malekzadeh, 1993) and empirical experiences of change of organizational culture (Heidrich, 1999) a model was constructed to synthesize the possible factors influencing cultural change. The factors that influence culture change are shown in the following figure. It is not the intention of this study to differentiate between the intensity of these factors in the change process.

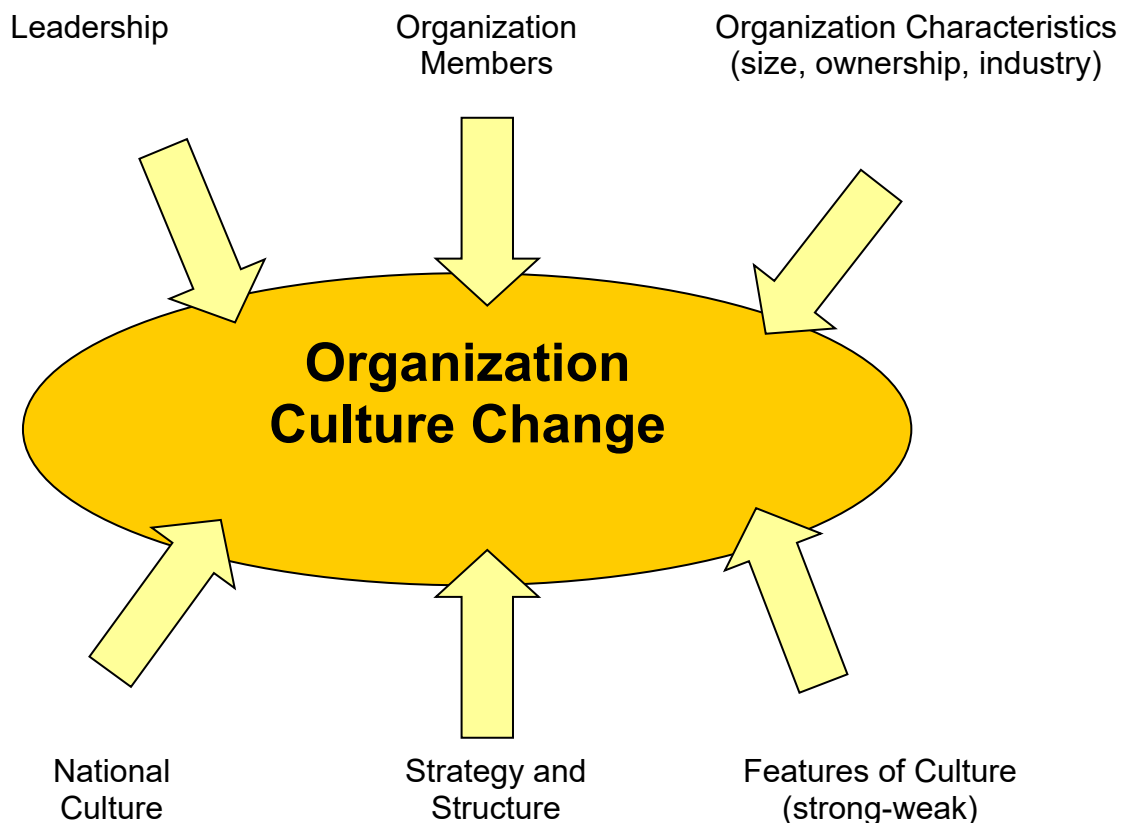


Fig.1. Factors influencing culture change

Leadership

The role of the leader has a determinant influence in creating and changing corporate culture. This is achieved by defining behavioural norms and decision making methods and through decisions influencing the value system.

Studies examining the role of the leader conclude the significant impact of the leader in shaping corporate culture. Schein (1985) and also Nahavandi and Malekzadeh (1993) noticed a “cultural creator” role of the leader, when founding an organization.

The Schein criteria that measure whether the leader had a definite impact on the culture are as follows:

1. His/her visions were shared unanimously.
2. His/her impact stayed vital after the organization's size had increased.

Nahavandi and Malekzadeh (1993) summarize the role of the leader in shaping culture as follows:

- Role Models
- Reward System
- Hiring
- Structure and Strategy
- Physical Setting

In the concept used later in this study, the role of the leader is determinant in the creation of culture. Culture changes established by the leader very often outlast the person. However, success stories are needed to validate the culture. These success stories are built into the value system of the organization and act as something to lean on in time of crisis and problems.

Organizational characteristics

The ownership structure, size of the organization and the given branch of industry all play a major role in the transition of the organization culture. Shared values of the organization are often undermined by external economic and social influences.

When the results of the above mentioned study were evaluated, the companies were grouped according to the three aspects included in the hypothesis:

- organization size (number of employees)
- branch of industry (production or service oriented)
- national culture (Hungarian and Romanian)

Strategy and structure

The long known interdependence of strategy-structure-culture confirms the strategy of any organization as a determinant factor in a culture change of any kind. The cultural change process is very often developed as a side factor to the overall strategic change program. Either way, it is certain that, just as in case of structure, culture cannot be managed separately from the strategy at any time. It is unrealistic to expect organization members to follow a new mission and goals alongside old values and beliefs. When formulating a 'strategic dream', the 'cultural bed' should be considered. The organization should fit the defined culture so as to avoid the envisaged dream becoming a strategic nightmare. The best way to manage the two factors is simultaneously and not in a sequential way. Strategy must be consistent to culture and vice versa. (Szintay, 2001)

The relation between structures and cultures is also well established. It is not the objective of this study to deal with the cultures created by the different structural forms nor does it consider cultures that reject certain structures.

The change of organization structure immediately initiates changes in culture. New departments are born, old ones die, and subsequently new groups of people are constructed. Within the new structure, organization members have to find new ways

of communication – and often must communicate and interact with different people. This leads to changes in culture.

Features of Strong Cultures

But change is in contradiction with most of the cultures. The basic elements of cultures are all against any changes. Their strength is in the stability of the shared values and assumptions about organizational behaviour. And these strengths can become the biggest constraints to any change.

It can be said that the stronger a culture, the more difficult it is to change it.

According to Nahavandi and Malekzadeh (1993) three elements compose the strength of a culture.

- The first element is all the shared beliefs, values and assumptions the organization shares. The number of these elements will determine how thick the culture is. The higher the number of shared assumptions, the thicker the culture. In thin cultures, few assumptions and values are held.

- The second element is the proportion of organizational members who share these basic assumptions. The more people agree with the various assumptions, the stronger it is.

- The third element is the clear order of these shared values and assumptions. If assumptions are clearly ordered, it becomes evident for the members which are central to the culture of the organization and which are not. The central ones are hard to change, whereas it is much easier in the case of the minor assumptions.

Some other factors also have an impact on the strength of a culture. Organizations with a homogenous and stable membership that has long tenure are more likely to have a strong culture. The number of employees and the geographic dispersion of the company also play a main role. A smaller organization with fewer employees is more likely to have a stronger homogenous culture. Handy also shares this argument when defining the types of cultures and talking about the power type of culture, which is typical for small enterprises managed and led by the founder. (Handy, 1990)

Strong cultures have just as many benefits as disadvantages. A strong culture can provide the members of the organization with a clear sense of identity. It can make the whole decision making process easier and can provide a competitive edge for the whole organization.

But strong culture might just as well be a constraint to success. When all these values and assumptions are deeply shared they are far more difficult to change.

The contradiction between the basic assumptions and patterns of the past can be combined with building change into those core values and cementing them with it, thus overcoming the contradiction. This way the organizational culture will still be very strong, but with the advantage of having the ability to respond to challenges with a strong commitment to change. To achieve this idealistic stage, leaders should find a very fine balance to build on.

Some of the cultural analysts reserve the term cultural change to refer to planned, more encompassing, and more substantial kinds of change than those which arise spontaneously within cultures or as a part of conscious efforts to keep an existing

culture vital. Culture change involves breaking with the past; cultural continuity is noticeably disrupted. It is an inherently disequilibrating process. (Schein, 1992)

National cultural background

The result of organization development programs is derived from two sources. Besides the defined organization objectives, the influence of national culture is also important. These two can have opposite influences on the organization.

A two-fold impact is seen in the implementation of organization change and development programs. The well-defined objectives and activity plans of top management work from top-to-bottom. National culture works in the opposite direction, from bottom-up. National culture appears to be one of the obstacles to organization change in Hungary and Romania.

Analysis of the results of the research questionnaire

Structure of the questionnaire and methodology

The research questionnaire was constructed within the frame of comprehensive OTKA-research¹ and is based on the chapter examining the organization culture. The chapter is divided into 6 question groups and contains a total of 40 statements. The statements are to be qualified on a scale ranging from 1 to 7 depending on how much the respondents agree with the content of the statement (1: *I do not agree with it*, 7: *I totally agree with it*). One of the purposes of the questionnaire is to explore the differences among the companies of the production- and service organizations in Hungary and Romania. We received and analyzed 442 completed questionnaires from the same number of organizations in each country. We used the 'expert opinion-method' in the course of the research, so we cannot form a real notion of the culture of the individual companies, we can only draw an overall picture of the branches of economy. The structure of the sample was the following:

Table 1. Number of Organizations in the Hungarian and the Romanian sample

Sector/Country	Hungary	Romania
<i>Production</i>	50	199
<i>Service</i>	44	72
<i>Public Service</i>	12	0
<i>Trading</i>	0	65
Total	106	336

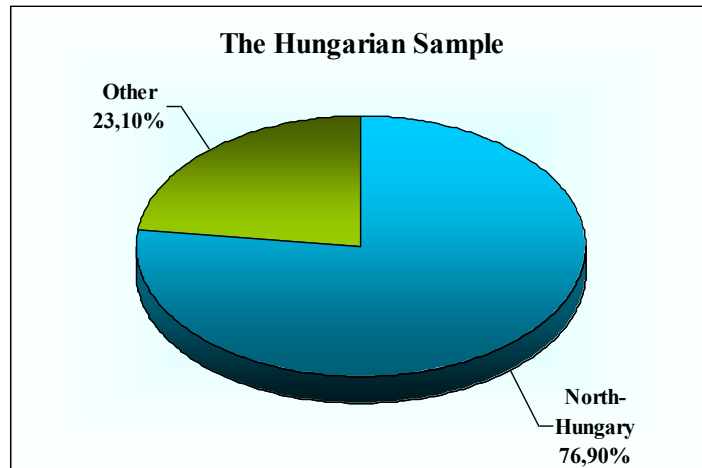


Fig. 2. The regional distribution of the Hungarian sample

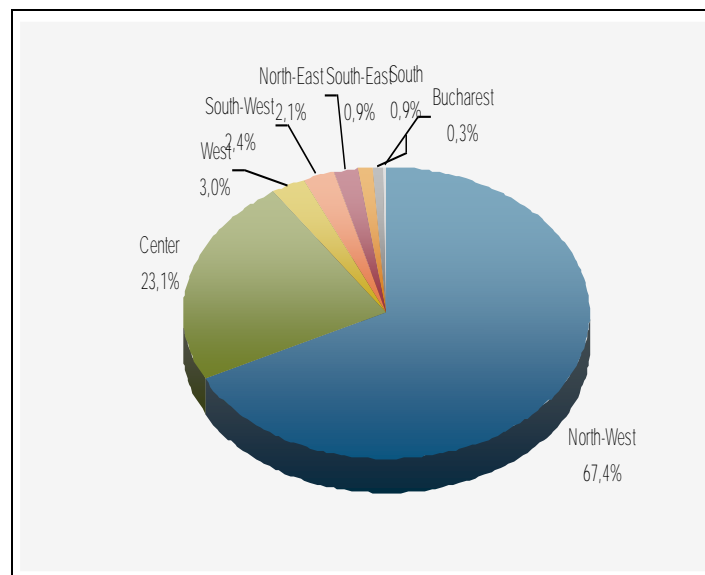


Fig. 3. The regional distribution of the Romanian sample

The question groups examining the organizational culture were the following:

1. **Personality of the leader:** culture-forming and shaping role of the leader, representation of the employees, representation of the interests of the group, sources of leadership credibility.
2. **Employees:** typical behavioural norms, motivations, criteria of individual success, transfer of norms and scores, clan vs. competitive (market) organizational culture.
3. **Strategy and (organization) culture:** strategic consciousness, application and acceptance of strategic methods, evaluation of the social and market environment, acceptance of change.
4. **Structure and co-ordination:** organization adaptability, methods of decision-making, technology and standardization, rules and procedures as cultural elements, information and power.
5. **Organization climate:** informal relationships, out-of-work relationships, level of trust, level of mutual loyalty (organization vs. members), ceremonies and rituals.

6. **National culture:** universalism vs. particularism, monochronic vs. polychronic cultures, feminine vs. masculine scores, individualistic vs. collective society, performance vs. ascription.

In the latter question group we applied the dimensions of Trompenaars, Hall and Hofstede, which were most related to the original research model regarding work values. However other dimensions (i.e. uncertainty avoidance, power distance, specific vs. diffuse) are also measured in the previous question groups as related concerns.

For the purpose of this article and the limitations of length of paper, question groups attached to leadership and national culture (i.e. question group 1, 2, 5, 6) are in focus. However related results and conclusions may appear as secondary explaining factors from the remaining question groups as well.

The Hungarian-Romanian Comparison

Leadership

In the primary Hungarian sample, production companies scored the lowest and the leaders seemed to be the least employee-friendly here. Employees of production companies perceived their leaders as the least fair, loyal and task-oriented. Highest scores were achieved by leaders of public service companies.

The caring type of leader was identified which translates to high human – and task-orientation were found at service organizations, whereas leaders focusing on the individual and the individuals' personal development at production companies, especially at SMEs.

The sample helped to identify the image of a leader who overwrites organizational rules and regulations for his/her own self-interest, but very often for the workers. The most typically it was demonstrated at production SMEs.

This leadership *type* was also evident in the Romanian sample having the highest score, as a leader who is strong, fair and caring for the members who are loyal to him/her. This type was most valued by organizations with 10-50 employees and least by the smaller ones.

This type of leader is defined as *paternalistic*, who guides both the professional as well as the personal lives of their subordinates in a manner resembling a parent. (Gelfand et. al, 2007).

Regarding the national comparison, there was a significant difference in every question except for Question 2. Romanian leaders scored higher in every aspect of the question group.

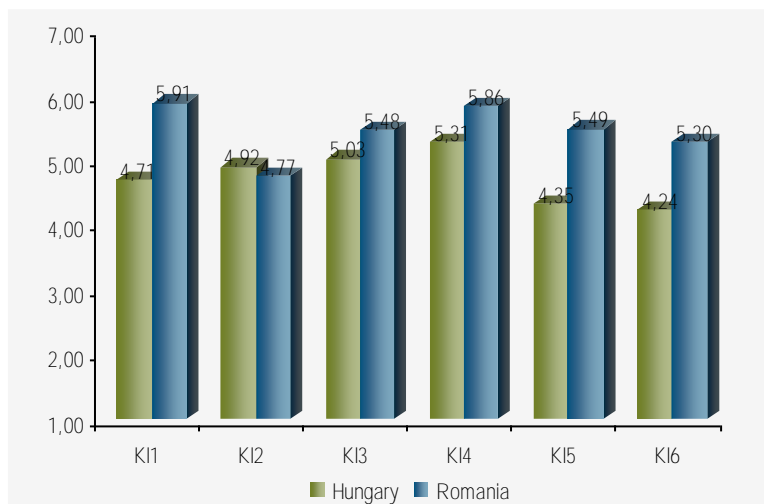


Fig. 4. Leaders- Hungarian-Romanian Comparison

National Culture

In all other question groups, higher scores showed somewhat more democratic, employee-friendly, organizations. In this question group the features of national culture has no qualifying translation. Questions tended to focus on contrasting values.

In the last question group regarding national-social culture, Romanian organizations scored higher in almost every aspect, except for social collectivism, which showed a higher level in the Hungarian sample.

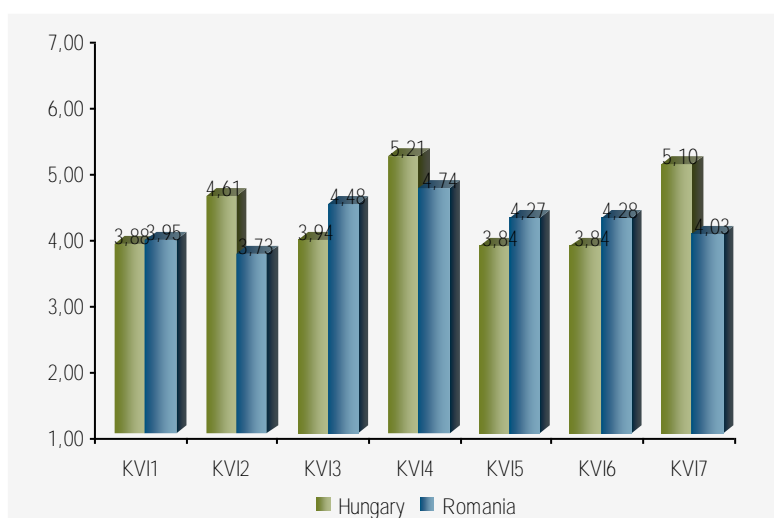


Fig. 5. National Cultural Background Hungarian-Romanian Comparison

Discussion

Paternalist leader as a well-accepted leadership type

The concept of paternalistic leadership is still ambiguous in the current state of the management, cross-cultural and psychological literature (Pellegrini and Scandura,

2008). The perspectives vary on cross-cultural and even on physiopsychological geoclimatic explanations. (Van de Vliert, 2006)

The paternalist type leader is even more appealing in Romanian organizations than in the Hungarian ones. Respondents of the questionnaire perceived the father type boss, with no rules applied, as a norm. This type does not operate in partnerships with the followers rather in a father with children to take care of. Therefore, on the relationship level, loyalty is high and mutual. For those ones who are not in the mutual circle of loyalty, the style left is rather autocratic on the task level and less humanistic on the relation level. For this reason Western scholars on this topic question the benevolent intent in paternalistic leadership. Uhl-Bien and Manslyn (2005) argued that paternalistic leaders demonstrates benevolence expressly because they want something in return and that the obligations created via benevolent acts are based on indebtedness and oppression.

Research suggest that paternalism could work as an effective leadership style in many non-Western cultures, however in the Western context it is considered manipulative and authoritative.

The shape of the paternalist leader proved to be industry independent. The perception is not different in production and in service companies. Its development is more frequent in SMEs corresponding to size. Another characteristic of the paternalist leader is that (s)he is not managing the organization based on the transparent organizational norms, but there is a continuous "personal game" with each and every follower within the mutual circle of loyalty. This game is operated within the framework of the previously-mentioned 'psychological contract', based on mutual expectations.

The Romanian sample has provided evidence that the solicitous leader with high correlation, is the one managing over any rule with personal leadership. Information sharing is not based on organizational rules, but on the given tasks and relations.

The Paternalist leader as one of the most accepted types has been identified and validated by the Hungarian sample as well. This type seems to have survived in post-communist countries. While the self-interest motivated dictator type is strongly rejected, the paternalist type with the same task-orientation, but more relation-oriented style remained as a desired one.

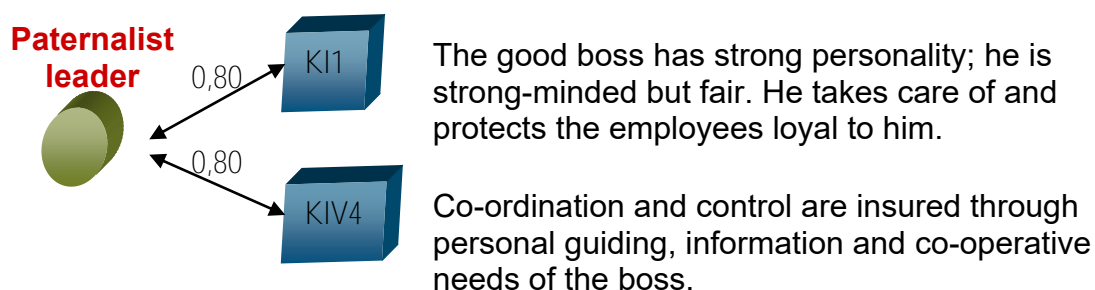


Fig. 6. Paternalist leader and co-ordination

Interestingly, the Paternalist leader type is independent of the size of the organization and there is no significant difference between SMEs and large organizations. However the appearance was more common in smaller organizations in the primary analysis.

The analysis by sector has not shown significant difference between production and service companies, but the paternalist leader was less common in service companies.

Additional features of paternalist leaders in SMEs

A typical phenomenon was identified as an obstacle of organizational changes, especially growth in SMEs:

- Very often the leader of the company is the owner as well. Therefore whatever decision is made is about private property. Trust becomes a decisive factor whom to involve in managerial decisions, thus sharing information about the company. To do so the leaders would need to employ managers who are trusted on the human and on the business level as well. This way direct, daily control would not be needed, which was taken for granted "in the good old days", when the company used to be smaller.

- Success is the obstacle to organization change. The paradox situation is that the company facing a growth problem is usually the shining evidence of a successful past. Based on financial and economic success, the owner-manager's beliefs about the "right leadership style" are enforced. However these beliefs and ideas are rarely self-conscious. Therefore failure does not occur in these situations as a major driving force for change.

- It would take a high level of self-reflection and leaders' humility for a key player of a success story to stay behind and let somebody more professional manage the business, admitting that his/her skills are not enough for a larger size organization. There is not much chance of this step, since most of the time these owner-managers are 'hands-on' men with no professional experience.

There is one more related issues worth a more detailed analysis as major result of the surveys, since the following phenomena proves the transition state of organizational cultures.

Family-type vs. Competitive Organizations

The factor analysis in the Romanian sample has proved the competitive feature of the organizations. Competition is both motivated by task-based performance and informal, relationship-power. Interestingly enough respondents also perceived their organizations as big families, while negative relations could not be shown between the supposedly two different groups of questions.

Positive correlation could be found between the questions regarding family features of the organizations, where trust and out-of-company informal relations were present.

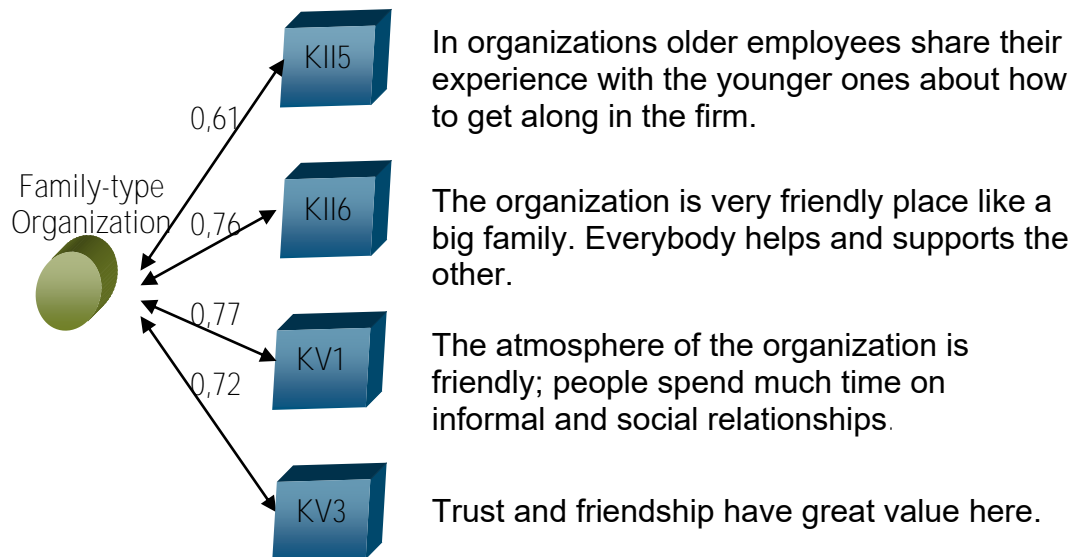


Fig. 7. Factor Analysis of Questions regarding Family-type Cultures

Regarding competition no significant difference could be shown based on size; however competitiveness grows with the size of the organizations. Competitiveness is not dependent on sectors.

National culture and organization culture seem to be related, with the masculine features of the society. Competitiveness as a typical masculine value proved to be related to organization competitiveness.

The seemingly contrasting value, family type, seemed to apply to smaller organizations, the larger organizations are, the less friendly cultures seem to develop. Sectors however have not appeared as influential factors on the friendliness of organizations, not on tendency, nor on relation. Very different results could be traced in the Hungarian sample, where service organizations in general and small production organizations proved to be significantly friendlier places in which to work.

The informal development of organization culture appears as a support for friendly organizations, just like trust in the organizations which the Hungarian sample was lacking. Therefore it seems that cultural features of a friendly organization are not necessarily derived from conscious management efforts in the Romanian sample.

As a conclusion we assume a transitional state of organization culture at Romanian organizations. While at Hungarian organizations family type organizations are less frequent, friendliness and competition as contrasting values go hand in hand in the Romanian sample. At service, but especially at production companies, the heritage of the communist past seems to be present to some degree. The collective mind and caring-organization contrasts here with the espoused values of the competitive company. A longitudinal survey in 5-10 years might prove competitive values as values in-use, with the fading of family values.

Conclusions of the surveys

On the basis of the analysis of the results of the questionnaire the following could be argued:

In the Hungarian sample significant differences are shown between the organization cultures of production and service companies. This relevant variance has appeared sharply in the entire 6 question groups. However this phenomena did not register in the Romanian sample.

Comparing culture of Hungarian production and the service companies we can say that, in the production sector the role of the leader is less caring, the level of informal relationships is lower, and the organizational climate is not so friendly (lack of readiness to help and climate of intimacy). Leaders and employees keep information back because of retaining power. In both countries the characteristic type of leader can be defined for the whole of the sample as *paternalist* which out rules the procedures and authority. This is especially significant at production SMEs.

Therefore this culture type seems to be the heritage of the communist past and could be considered as a transitional culture. Old values of the past have not faded away completely, but new ones of the market economy are emerging. This explains the simultaneous presence of seemingly very contrastive values. (I.e. friendliness vs. competition).

Summary

The objective of the study was to identify cultural characteristics of service and production companies in the Northern-Hungarian region and in mainly the Transylvanian part of Romania in transition times. Six dimensions were used for comparison. Significant differences could be traced between the two sample based on cultural background. The sector of business was more of an influential factor in the Hungarian sample.

In both samples paternalistic leadership has appeared as a well-accepted, culture-shaping type. This seems to be the survival character of communism but also as a possible cultural change driver for the future.

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The New Integrated and Colaborative Managerial Philosophy “ECR” and Business Ethics

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“Prosperity make friends, adversity tries them”
Maxim Publius Syrus

“To see what is right and not to do it is a lack of courage”
Confucius

Abstract:

The ECR is a happy mixture between management, marketing and ethics.

The relationship between ethical conduct and law sometime is confusing. Some would rationalize that actions within the law are therefore ethical and perfectly justifiable. But an “if it’s legal, it’s ethical” attitude disregards the fact that the law “codifies only that part of ethics which society feels so strongly about that it is willing to support it with physical force”.

Many practices are within the law, such as firing an employee just before retirement benefits becomes vested, or charging a naive customer more than a fair price: yet many people would see these as unethical practices.

Can actions be ethical but illegal? Violating the fair trade laws, which at one time prohibited retailers from offering certain brands below a designated price, is a case in point. If a firm engages in illegal price cutting, is this unethical? Many people see these acts as ethical, even though they are against the law.

The numerous relationships between marketing intermediaries present many opportunities for conflicts and disputes, some of which may be related to ethical or unethical behaviors. Manipulating a product’s availability for purposes of exploitation and using coercion to force intermediaries to behave in a specific manner are particularly serious ethical issues in the distribution sphere. For example, a powerful manufacturer can exert undue influence over an intermediary’s choice of whether to handle a product or how to handle it.

“Virtues such as honesty are not self evident when applied to complex marketing decisions”. O. C. Ferrel University of Memphis.

The vision of Efficient Consumer Response philosophy is “Working together to fulfill consumer wishes better, faster and less cost” this in my opinion require three essential issues, first changing nature of managerial work, second changing nature of marketing, third a strong business ethics.

Changing of Managerial Work

Among the many changes affecting managerial work today, the concept of the “upside-down pyramid” is one of the most symbolic. In figure 1 is described this view which is a new way of looking at organizations and the people in them.

The operating workers are at the top of the pyramid: they are supported in their work efforts by managers located at the bottom. These managers aren’t just order –givers, they are there to help other people serve customer needs. The implication of figure 1 are dramatic for day-to-day work in all settings. From this perspective, each individual is a value-added worker – someone who must do something that creates eventual value for organization’s customers or clients.

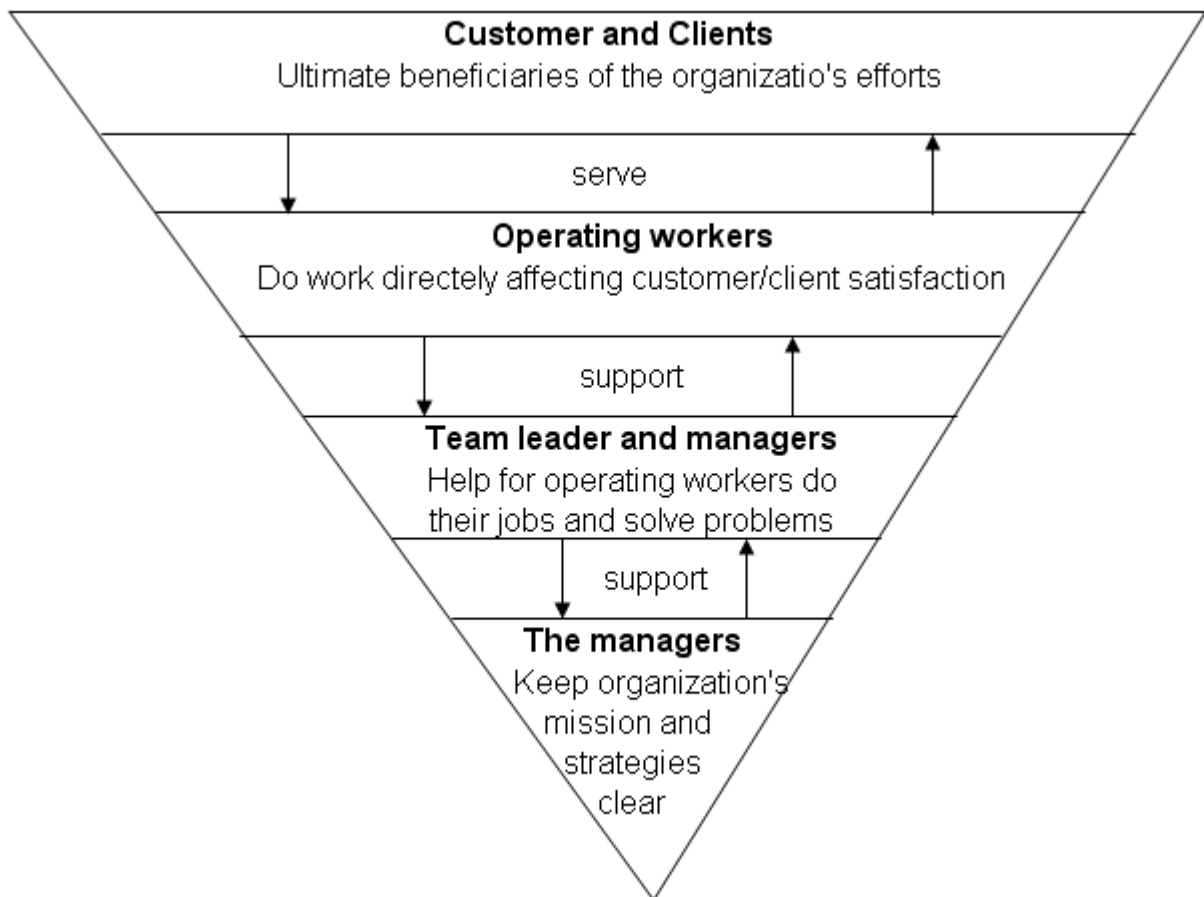


Fig. 1. The upside-down pyramid view of organizations
 (John R. Schermerhorn Jr., Management 6th ed., John Wiley & Sons Inc. New York, 1999)

The whole organization is devoted to serving the customer, and this is made possible with the support managers.

Many trends and emerging approaches to organizations, such as the upside-down pyramid, require new thinking from the people who staff them. We are entering a time of knowledge management when the best managers are known more for “helping” and “supporting” than for “directing” and “order-giving”. Of course, even in this age of high technology IT and “smart machines”, the human resource is indispensable for its knowledge’s.

Worker involvement and empowerment are critical building blocks of organizational success.

Full human resource utilization increasingly means changing the way work gets done organizations by pushing decision-making authority to the point where the best information and knowledge exists with the operating workers. Jobs in the New Work place are less clearly defined; there is more emphasis and teamwork and people move from project to project as their skills and expertise are applicable. Increasingly, even the title of “manager” is being replaced in the organization charts by “coordinator”, “coach”, “team leader” or “knowledge-leader” as.

Changing Nature of Marketing

The nature of marketing is changing. New insight, new tools, new opportunities and new challenges are emerging as we step in to 21st century. And so too are our customers ... ready targets for new global competitors. New pressures also emerge as managers operate in delay red organizations, stripped of supporting services and yet freed from the quagmire of tier upon tier or management. This means more managers need to understand marketing which, itself, is changing.

Marketing has moved from “customer acquisition” (winning new customer) through “customer” (keeping customers for life) towards “customer deselection” (dumping unprofitable customers while selectively seeking and keeping the more profitable ones). This is sometimes called “adverse selection”. It is becoming obvious that some customers are promiscuous non-legal bargain hunters who exploit any sales promotion and move on the next supplier as and when the next special offer appears.

These customers cost a lot for very little return, in fact, most of them are unprofitable. Given the some estimates suggest that new customers cost five times more than existing customers or, another way, selling to existing customers can be five times more profitable than winning new customers, you can see how it pays to know and love your customers, particularly the loyal and profitable ones. Some customers became loyal because they prefer our product or service, other want a stable relationship with one supplier, other spend more, pay more quickly require less service. Although recovery strategies (for lost customers) are important, some defectors are not worth saving. Carefully designed customer selection strategies can leave the competition as with nothing but undesirable customer segments the fight over.

Marketing is changing. New tools, such as data mining and the much misunderstood internet, offer a host of dynamic opportunities beyond selling. Change is rampant, particularly in marketing. Even the traditional suppliers, or agencies, are changing. Apart from changing the services they offer, they are changing their names to reflect changes in the marketing services market place. Burson Marsteller, in 1999, the world's biggest PR agency, has dropped “Public Relations” from his name, and Saatchi and Saatchi has dropped “advertising” from its name.

Managers too have to change – accept the need for “life long learning”, and continually update and improve themselves with new skills, new insights, new tools.

Before looking at the “strong business ethics” consider briefly marketing. A simple dictionary definition of marketing reveals: “Marketing means the business of moving goods from the producer of the consumer”. Goods can be taken to mean good or services.

The Chartered Institute of Marketing in the UK defines marketing as: “The management process responsible for identifying, anticipating and satisfying customer requirements profitably”.

Some years ago the American Marketing Association spent time and effort considering the appropriateness and accuracy of their definition of marketing. Their

new definition incorporated one major change – they took “profit” out, possibly because it excluded the vast armies of marketing professionals who work for charities and other non-profit-making organizations. Also perhaps now it’s very important that all peoples involved in business “win”, now the old slogan “win-loss” or “winner-loser” is changed in “winner-winner-winner”. So in the UK definition perhaps be better replace “profitably” with “efficiently” or “in a way that meets the organization’s goods”.

A simpler definition can be “marketing is the selling of goods that don’t come back to people who do”. “Goods that don’t come back” emphasizes the importance of matching the promise (made by, say, the advertising or the packaging) with the reality of the product’s or service’s quality, i.e. the level of quality should match that which is advertised. In the long term it does not pay to cheat the customer.

Real marketing success depends on repeat business, and that is where “people who don’t come back” embraces the customer’s “lifetime value” concept. Customers do not buy just one can of beans, one car, or one photocopier machine. They buy thousands of cans of beans, dozens of cars and dozens of photocopiers during their “lifetime”.

There the marketing challenge lies in attracting and retaining profitable customers efficiently. A move away from the “one-off sales syndrome” allows marketing horizons to broaden to lifetime customers and lifetime strategies. And today marketers are really interested in separating unprofitable from profitable customers, so that those customers who really do contribute to the bottom line can be nurtured. Lifetime customers are built through strong relationships which, in turn, require relationship marketing skills. Another set of relationship skills is also emerging in the form of marketing marriage. Marketing marriages such as joint promotions, shared databases, shared distribution network and strategic alliance offer new opportunities for existing markets, but also offer new routes into global markets previously inaccessible because of an organization’s limited resources.

Foul – smelling mountain – small portion in life.

The tinned cat food market in the UK is huge. To put it in perspective imagine, if you can, the entire Albert Hall filled from floor to ceiling in cat food. Remove the shell of the building, like a giant jelly mould, to leave a quivering mountain of pull smelling, jellied meat and you have a vivid picture of the amount of food that cats in this country munch their way through every two months – amazing when you consider that only 23 percent of homes in the UK have a cat. (Source: Ivan Pallard, media Planning Director BMP DDB Needham).

Conclusion: Marketers must view customers as lifetime values beyond short term horizons.

Ethics are our beliefs about what is right and what is wrong. The planning process recognizes responsibilities to consumers, channel members, and the company. This responsibility is accomplished by designing a marketing strategy to satisfy the needs of each of these groups. The law and general public-policy issues also come into play. However, personal beliefs about what is right and what is wrong should also constrain our decision making. It is called exercising ethical standard.

Ultimately, marketing planners must live with their professional behavior and decisions in the same way that they must live with their personal behavior and decisions.

An implication of the theory of competitive rationality is that the ethics and values of marketing planners greatly influence society. Because supplier behavior shapes consumer behavior that values of marketing planners expressed in what they make and how they sell set a moral tone in and beyond the market place. The ethical dilemmas can be complex.

The Law is a Minimum Ethical Standard

Why do we need ethics when we have the law, which tells us what we can and cannot do? One answer is that the letter of the law is generally considered to be only a minimum ethical standard. Another answer is that the law often does not work the way it should be. As aptly state in the code of ethics of Caterpillar Tractor, the law is a floor, and must not serve as the only basis for individual and corporate ethics.

Competition, Ethics and Efficiency

Social Darwinism was used to excuse the sharp trading practices of the so-called robber barons who dominated American business at the turn of the century. These industrialists, financiers and entrepreneurs helped make the United States a superpower. They left endowments that built some of the finest universities in the world. But they were also quite unscrupulous at times. On a similar theme, some marketers and economists have used Adam Smith's economic philosophy to argue that it is right to pursue self interest (read selfish interest) in the market place, using any means within or around the law. It is true that competition makes the market efficient, but only in an ethical environment.

For example, if suppliers conspire to reduce competition, then competition ceases to exist. Competition is also reduced if suppliers are not honest in their product or service claims. If advertising is deceptive or contractual promises are non kept, then the competitive pursuit of "self-interest" will no longer be efficient and serve the interest of consumers and society. When ethics do not exist, the visible hand of government regulation must ensure that competition works honestly and openly.

The Categorical Imperative

Emanuel Kant's famous categorical imperative offers an alternative to situational ethics. His approach is to ask whether the proposed action would be right if everyone did it. What would happen to the social fabric? What would happen if you were constantly on the receive and of such ethics? This approach takes most of the situation or context out of the ethical evaluation and, in that sense, is more explicit than the utilitarian principle. But the categorical imperative still requires the decision maker to see the universal wrong or evil in the act of everyone did it. Immoral or amoral individuals, caring nothing for society, may answer that yes it would be fine for society and that others are welcome

to act in the same way toward them. Both situational ethics and the categorical imperative still require a basic set of values. Such values are normally based on religious beliefs.

The Religious Foundations of Marketing Ethics

It is no accident that both primitive and advanced civilizations have ethical and moral codes that constrain group and individual behavior. The enlightenment of a civilization is often measured by its underlying ethics. When ethical codes break down, societies cease to function and ultimately collapse from within (for example, the decline and fall of the Roman Empire) or under external pressures (for example, the defeat of the Third Reich in the World War II). How such ethical codes do come about? The history of civilization reveals that they are based on a society's predominant religious creed. As the obvious source of a marketing decision maker's code of ethics is the society's general code of ethics, this suggests that marketplace ethics will have a religious basis.

The predominant religion of the USA is Christianity. The Judeo-Christian creed has greatly influenced the constitution, common law, and the system of justice in the USA. Thus, it can be argued that marketers in USA should at least evaluate, if not adapt, a code of marketing ethics based on Judeo-Christian religious beliefs.

Conflicts can result when this theory is applied to societies in which freedom of worship and thought is a right. It is to be expected, and appropriate, in a free society that a believer of another religion will apply his or her religious ethics to all situations, including marketing decision making. This exercise of different religious beliefs and values increases the variability. In ethics that Americans are likely to observe in the marketplace.

One reason Americans should use the predominant religion's values as the common case for American society's ethics is that they enable Americans to anticipate the likely behavior of other parties in the market. This anticipation leads to an increase in trust and sense of confidence and control that the market is orderly and fair. If the clearly dominant and underlying religious creed in American society is not to be used as the foundation for a generally difficult to argue that some other religious or moral philosophy should be substituted.

Ethics and the Law

The relationship between ethical conduct and the law sometimes is confusing. Some would rationalize that actions within the law are therefore ethical and perfectly justifiable. But an "if it's legal, it's ethical" attitude disregards the fact that the law "codifies only that part of ethics which society feels so strongly about that it is willing to support it with physical force". Many practices are within the law, such as firing an employee just before retirement benefits became vested, or charging a naïve customer more than a fair price, yet many people would see these as unethical practices.

Can actions be ethical but illegal? Violating the fair trade laws, which at one time prohibited retailers from offering certain brands below a designated price, is a case in point. If a firm engages in illegal price cutting, is this unethical? Many people see this act as ethical, even though they are against the law.

Ethics concerns standards for decision making and right conduct. Unfortunately, there is little agreement as to what constitutes ethical behavior. At the extremes, of course, there is not much dispute. For example most observers would consider representing used goods as new as unethical and a “no questions asked” refund policy as ethical.

But many other practices fall into a “gray area”, which is not clearly unethical and not illegal, yet perhaps not entirely ethical.

- Using handicapped or poor people to sell products through emotional appeals.
- Using high-pressure tactics in persuading people to buy.
- Misleading customers into thinking they are getting a bargain.
- Entertaining clients with call girls.
- Disclosing confidential information about one customer to other customer.
- Cheating on expense accounts.
- Making false or disparaging remarks about a competitor.

Disagreement about ethical conduct arises particularly regarding the amount and veracity of information that should be supplied potential customers in making their buying decisions. This is, of course, less of a problem with industrial buyers and professionals than with consumers. In recent years increasing pressure has been applied for direct legislation for true standards, unit prices, truth in packaging and the like, and has resulted in some legislation the conviction is even growing that anything less than full disclosure is unethical. Yet many sellers still see nothing unethical in extolling their products, “virtues” (perhaps with enthusiastic exaggeration commonly known as “puffing”), while maintaining complete silence on any known inadequacies. This is simply part of the selling, they claim.

Unfortunately we can not represent on the some continuity both conducts ethical and legal, because their extremes are not in the points, in this situation a model about relationship between ethical conduct and the law can be represent only on the coordinates axis system as in figure no. 2.

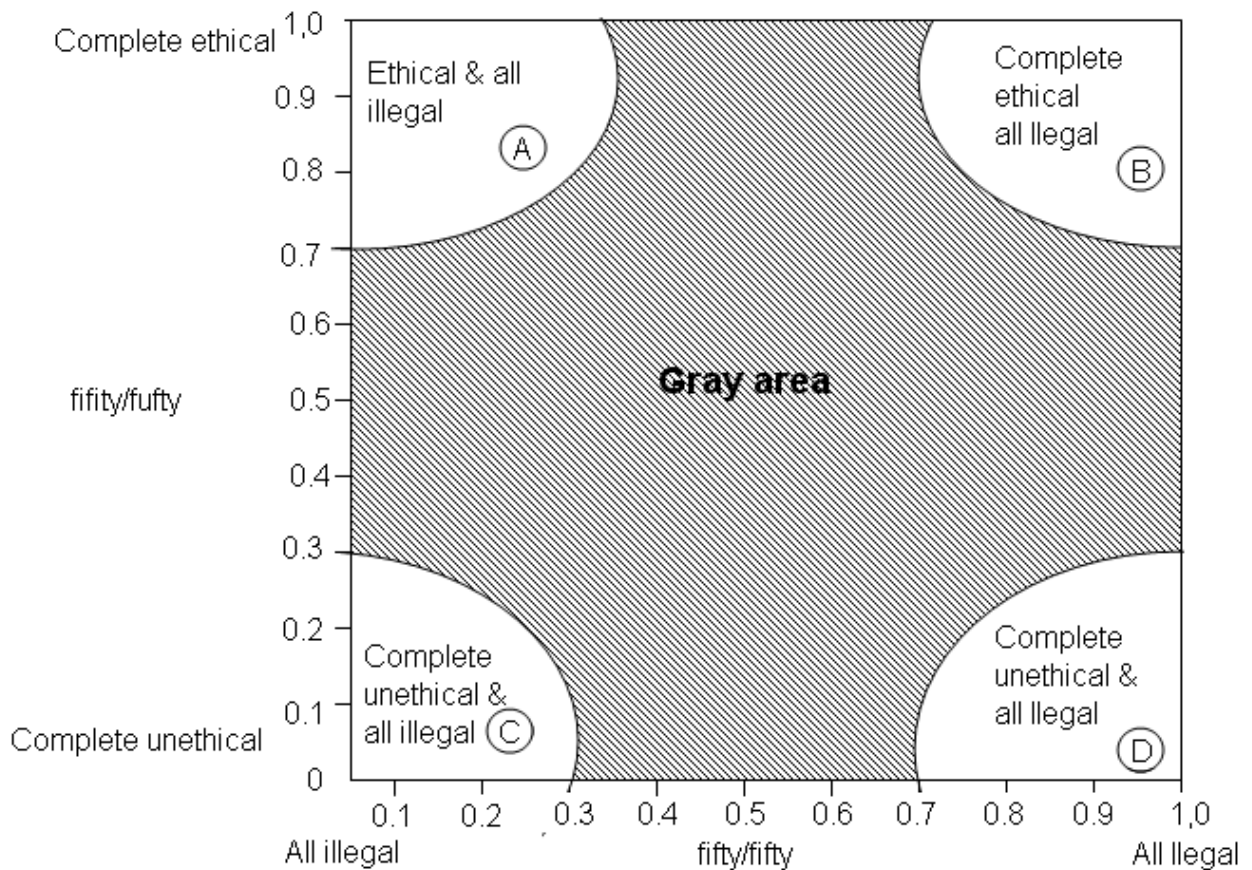


Fig. 2. Perspective of ethical and legal behavior

Figure 2 represents the perspective of ethical and legal behavior, reflecting some of the issues presented. Although most people would consider certain actions as ethical or unethical, legal or illegal, other behavior falls in the gray area.

In figure, plot examples of questionable practices from the preceding list. Several points are already established in this figure. Representing used goods as new is equal to point “C” and would be both unethical and illegal. Selling a medicine without recipe for an especially situation is plotted as point “A” is illegal but ethical.

Firing an old employee shortly before retirement benefits become vested might best be plotted as “D”, being legal but likely unethical. And a “no questions asked” refund policy certainly would be both legal and ethical and would be plotted as “B”. Now where would we plot using handicapped people to sell through emotional appeals using high pressure tactics, misleading customers, using call girls, violating confidentiality, expense-account cheating, and disparaging a competitor?

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Ethics and Profits

Many business people assume that the more strictly are interpreted ethical behavior, the more profits suffer. Certainly, the muted sales efforts that may result from tanning down products claims or resisting customer hints and even demands (especially in some foreign countries) for bribes or kickbacks may hurt profits. Yet, a strong argument can also be made that scrupulously honest and ethical behavior is better for business and for profits. Well-satisfied customers tend to bring repeat business. An unbending disavowal of the unethical practices of bribery and kickbacks may help to restore a health or business environment for an entire industry. Using call girls, violating confidentiality, expense-account cheating, and disparaging a competitor?

The firm's representation for honest dealings can be a powerful competitive advance. Ethical conduct is compatible with maximizing profits in the long run, although in the very short run, disregard of high moral principles may yield more profits.

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The Role of Business in Solving Social Problems of Local Communities in Russia

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Introduction

The topic of social responsibility of business has been gaining popularity in Russia during the recent years. One of advantages of social responsibility of business is cooperation with local authorities and local communities in solving social problems. Theoretical concept “social responsibility” is new for Russia and also it is understood differently by scientists, businessmen, the people and the government. At the same time social practices united by this concept aren't new for Russia. Business structures and enterprises had always stated participation in social issues of particular towns and settlements as their priority. After Russia went over to market economy, the role of business structures in life of local communities has changed as well as these communities have changed themselves.

Research Goal

The purpose of given article – to analyse a role of forming-the-city enterprises in the decision of social problems of local community.

Methodology

We based our research on the poll results conducted among local population of the Ural region from 2003 to 2010. We also used data from social reports of corporations which have their branches in these regions. Moreover, we have interviewed several town executives of the region.

The Factors Defining the Role of Business in the Decision of Problems of Local Community

The researches carried out by us have shown, the business role in the decision of social problems of local community depends on several major factors, such as:

1. Municipal union characteristics:
 - Historical conditions of a development of the city,
 - A city inclusiveness in external interrelations,
 - The size of a city (large, average or small),
 - Structure of the city budget (the city the donor or дотационным is).
2. Business characteristics:
 - Presence in municipal union territory forming-the-city enterprises,
 - A branch accessory of business,
 - Development of small and average business in municipal union territory.

The combination of these factors gives us unique model of mutual relations of business and local community. In given article we will consider a role градообразующих the enterprises in the decision of social problems of cities of Ural Mountains and Western Siberia.

Characteristics of Monocities

Specificity of Ural-Siberian region consists that the considerable quantity of the large industrial enterprises is concentrated to its territory. Historically cities of Ural mountains were formed round factories and factories. In this connection many cities are monoprofile – i.e. have one (or two) forming-the-city enterprises. According to the data of the ministry of regional development, in Russia more than 400 monocities, live 24 percent of urban population of the country in them, before crisis they created 40 percent of gross national product. Ural mountains and Western Siberia — leaders by quantity of monocities in the country. It speaks about branch specialisation of region – in its territory the enterprises black and nonferrous metallurgy, mechanical engineering, petro- and gas production traditionally settle down. During the soviet period the social infrastructure of such cities almost completely depended from forming-the-city enterprise.

During the Post-Soviet period the pattern of ownership forming-the-city enterprises has changed, many of them have changed the owner some times. However the majority of them is compelled to keep at least partially social programs directed not only on workers, but also on the city population. Within the limits of reform of local government which has begun in 2003, градообразующие the enterprises should transfer objects of socially-housing sphere to balance of municipality. It has led to partial removal from the enterprises of burden of the decision of social problems of the population. At the same time local governments have in many respects appeared unprepared to management of social sphere, and the population of monocities continues to consider these enterprises as the basic subject of social city department.

For the characteristic of such cities it is possible to use the model of "city-worker" offered by the Ural sociologists [1]. According to the given model the development of the city is defined by business interests forming-the-city enterprises. The general economic and political conditions of realisation of the given model are economic growth and local government preservation. The large business presented forming-the-city enterprises (corporations) however starts to dominate. For corporation the city acts basically as a place of concentration of the resources providing manufacture and sale of production (a labour, an infrastructure, intellectual achievements, water, energy, etc.).

Today the basic problem characteristic of model "city-worker" is an amplifying dictatorship of business. It is not favourable in the economic plan to the business and is inefficient in the social plan for a city. The corporation is compelled to carry out compensating function, to "complete" a city to level which is necessary for manufacture maintenance. In any sense business itself to become compelled "city". The business contribution is thus defined proceeding from requirements for maintenance with almost all necessary resources for manufacture and production sale. On its balance are energo - water- and a heat supply, and also systems of reproduction of a labour - the general and vocational training, public health services, leisure and a recreation. Housing and communal services at such approach remain to one of "shops" forming-the-city enterprises. Almost all city life is subordinated to interests of manufacture. Thus the local government exists, however frequently does not possess the real power, local communities are not involved in decision-making process on development of social sphere.

Specific type of monocities, "cities-workers", cities-isolated are. As they have type of city settlement not too many historical analogues. On a number of signs they remind «cities of the companies» (company towns) which in industrialisation XIX – the beginnings of XX centuries arose on a place of the rich resource "platforms" geographically removed from the developed centres of the population.

The American researcher-urbanist D.Rotblatt allocates as the most expressive line of these isolated settlements of a mining profile development paternal relations between proprietors-employers and workers of the basic manufactures living here [2]. It was shown, first of all, that minimised before maintenance of primary requirements of workers the social environment of such settlements entirely is formed and copes the companies carrying out manufacture which act simultaneously as proprietors of available housing, trading enterprises and objects of sphere of services, remaining also monopolists in sphere of the offer of workplaces.

In Russia as analogue western «cities of the companies» "large village" - type of settlements which has arisen during the period of industrialism is considered. This erected in a city rank the expanded settlement round large monobranch manufacture. Such settlements entirely submitted to interests of maintenance of a concrete kind of manufacture [3].

In territory of Ural Mountains and Western Siberia it is possible to carry to cities-isolated, first, remote geographically and transportably cities Hunts-Mansijskogo and Yamal-Nenets autonomous regions. Frequently they have only an air communication with "Continent", for example, Uraj, Gubkinsky etc.

Secondly, it is so-called ZATO - the closed administrative-territorial formations. They have been created round objects for which the particular treatment of safety and the state secret is established. In territory of the Ural federal district it is located five ZATOs, the enterprises of Rosatom concerning a nuclear-weapon complex and four, concerning the Ministry of Defence. As these forming-the-city enterprises, and cities are highly dependences on activity of federal authorities. Up to the present closeness quite often serves as the major means of warranting ZATO higher and comfortable in comparison with their social environment of standards of ability to live. It is connected not only with social inertia of a Soviet period, but also with remaining higher budgetary security of the closed nuclear and military cities.

If in the majority of municipal unions градообразующие the enterprises have transferred for a long time to balance of local governments social objects – habitation, municipal networks etc. in the majority ZATO it has not occurred. The population depends on the enterprise in questions water, warmly - and electrical supplies (for example, such situation has occurred in Lesnoj city, Sverdlovsk region) [4].

One more important characteristic of municipal union defining a role of forming-the-city enterprise in the decision of social problems of the population, is the size of a city. Their distinctive feature is not only quantity of the population, but also a considerable difference in development of a social infrastructure and business structure. Among the most problem monocities of Ural Mountains and Western Siberia small cities with a population to 50 thousand persons – for example, Kirovgrad, Krasnouralsk, Severouralsk, Kachkanar prevail.

In small and average cities often there is a problem of mutual relations forming-the-city enterprise with local governments. From a Soviet period there was a system of authoritative financial and economic "pressure" upon local authorities from outside forming-the-city enterprise. Became daily occurrence of an expert of "pressure" upon the power, attempts of frank blackmail or original "capture" of bodies of municipal authority by carrying out forming-the-city enterprises of the representatives in these bodies.

Features of Forming-the-City Enterprises

The important factor which defines the size of participation forming-the-city enterprises in the decision of social problems of the population, degree of its independence is. The majority of the enterprises black and nonferrous metallurgy, oil and gas production complex in Ural Mountains are a part of the vertically-integrated structures. Only five manufactures in sphere of ferrous metallurgy from 23 presented to Ural region formally are not members of the vertically-integrated groups. Five градообразующих the enterprises concern Evraz Group, three - to MMC, on two - to NLMC and the Trumpet metallurgical company. Seven more holdings are presented on one enterprise [5].

Participation of such enterprises in the decision of social and economic problems of municipal union is in many respects defined by a policy of holding. In most cases the head office of holdings is in Moscow or abroad. In such cases the municipal union territory is considered basically as an industrial platform. A classical example — the cities of Magnitogorsk and Nizhnij Tagil. Cities are comparable: approximately an identical population, in everyone — industrial complex of a full cycle. But the head office of Magnitogorsk metallurgical industrial complex is in the Magnitogorsk, the Nizhne-Tagilsky metallurgical industrial complex is a part of Evraz. As a result on many social and economic indexes (to the salary, development of a consumer sector, transport, etc.) Nizhnij Tagil considerably concedes to Magnitogorsk.

Other situation has developed in Khanty-Mansiysk autonomous region. In many cities located in its territory, there are headquarters of large oil-extracting holdings. Surgut — "capital" of "Surgutneftegaz" and cities of this holding, Nizhnevartovsk — the multinational corporation-VR, Nefteyugansk — "Rosneft", Kogalym — «Lukoil», Khanty-Mansiysk — «Oil Gazprom». Coincidence of a point of production and control centre more favourably from the point of view of city balanced development. In this case, first, the company management is more attentive to city problems, secondly, monetary streams accumulate in territory, thirdly, the centre of administrative functions of the large enterprise promotes development of non-productive sector of a city economy.

Basically large holdings define the size of the participation in financing of social programs of territories of presence by signing of agreements with local governments. For example, in the Perm edge more the enterprises of oil-extracting holding Lukoil are in more than 20 municipal unions. In interview the head of one of these MU has told that is primary in the beginning of 2000th years the size of the help to municipal union depended in many respects on personal relations of the head of administration with company management. Further LUKOIL has signed with MU the general agreement according to which the size of the help is defined proportionally to the size of an oil recovery in territory MU.

The general social and economic situation in monocities directly depends on an economic condition of forming-the-city enterprise. Bankruptcy and closing of forming-the-city enterprise becomes a social disaster for local population – the rate of unemployment sharply raises, there are only minimum financed of means of federal and regional budgets social programs. It leads to decrease in a standard of living of the population, growth of social intensity, occurrence of social parasitism. In such cases the regional administration undertook attempts of resettlement of townsmen, for example after closing of mines in Kizel of the Perm edge. However such programs have not crowned success.

Crisis of 2008 has negatively affected an economic situation of many of forming-the-city enterprises of Ural Mountains first of all working in sphere colour and ferrous metallurgy, mechanical engineering. The steadiest economic situation has remained at the enterprises of oil and gas sphere.

In the conditions of crisis the social and economic situation in many monocities has extremely become aggravated. A delay under the salary, mass lay-offs, threat of full closing of such enterprises practically deprives of inhabitants of monocities of means of subsistence. After crisis 2008 many companies have appeared not to carry out of the raised social obligations in forces. They remove from balance of the enterprise not profile actives – building divisions, hotel complexes, sport clubs, Palaces of culture, sanatoria, food industrial complexes, etc. For example, such steps have undertaken companies RUSAL, UGMC and others.

In the end of December, 2009 the anti-recessionary commission of the government of the Russian Federation under the direction of the first vice-premier Igor Shuvalov has made sample of the most requiring monocities of the country. To these settlements it decided to render the prime state help in 2010. From 27 settlements in the federal list seven Ural cities appear: Asbestos, Nizhnij Tagil and Kamensk-Ural (Sverdlovsk region); Karabash and Satka (the Chelyabinsk region); Чусовой (the Perm edge); Sarapul (the Udmurt republic).

Opinion of the Population of Monocities on Role of Forming-the-City Enterprises in the Decision of Social Problems

The Ural sociologists within 2003-2007 have spent a number of researches of a role of forming-the-city enterprises in development of cities. During researches it has been interrogated more than 1500 persons living in large average and small monocities of Ural Mountains and Western Siberia. Results of researches show that forming-the-city enterprises continue to play very considerable role in functioning and development of a social complex of cities even in modern conditions. It finds the reflexion in positions and expectations of various groups of their population [6,7,8].

1. Priority influence of forming-the-city enterprises on social sphere of municipal union is marked. The role of forming-the-city enterprises in big cities is concentrated today first of all in development of such segments of social sphere as sports, physical culture, formation, development of children, work with youth, the culture and art, etc. pass questions of the organisation of corporate system of social protection and professional employment of workers of the enterprises and their families To the second place.

2. The opinion that forming-the-city enterprises should reserve a network of social establishments remains. At the same time the population expresses and for strengthening of a role of local governments in management of social sphere of cities. Dependence of local governments from градообразующих the enterprises is marked. In many cities the administration is perceived almost by division forming-the-city enterprises , especially in the oil and gas cities of JNAO and XMAO. The population position on this question differs a duality – necessity of the control over activity градообразующих the enterprises on the one hand is marked. With another - the population considers that without forming-the-city enterprises the further development of social sphere of a city is impossible.

3. Research has revealed following tendencies: in many respects the opinion of the population and managers forming-the-city enterprises and local structures is inconsistent and depends on what prospects of a development of the city they see in the future. Supporters of preservation of existing model of development express basically for preservation and even role strengthening forming-the-city enterprises in management of social sphere MU. Supporters of a diversification of a city economy, development of small and average business would like to see partner relations between forming-the-city enterprises, administration MU and various structures of a civil society.

Ways of Development of Monocities

The problem of development of monocities is widely discussed both the public, and the Russian government. The way which recognise all is a sharp decrease in a role of forming-the-city enterprises in monocity development. To occur it should several ways:

1. Removal from balance forming-the-city enterprises of objects of social sphere, decrease in financing of social programs, basic reduction of social functions of forming-the-city enterprises . The given measure will help to make business by more profitable and to rescue the enterprises from bankruptcy. As a result it will allow to avoid social explosions in monocities.

2. Development of small and average business which will help to create new workplaces to increase tax revenues in the budget and by that to lower a sharpness of social problems standing in monocities. For stability of a social and economic condition of municipal union 4-5 large enterprises – employers are necessary at least.

3. Change of a tax mode. Now the majority of tax payments from profit градообразующих the enterprises arrives in the federal budget. Redistribution of tax means in favour of budgets of municipal unions will allow them to finance independently necessary social programs of support of the population.

4. Programs of the state support forming-the-city enterprises and monocities. In 2010 the Russian government assumes to allocate to 10 billion roubles for each project of support of a monocity.

5. The position of forming-the-city enterprises in relation to local governments radically should change. It is necessary to pass from traditional model of development "city-worker" to more liberal – "city-society". The Major principle of this model - not a city for forming-the-city enterprises the enterprises, and these enterprises for a city.

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An Islamic Approach Of Implementing A Management System Based on Religious Values

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Abstract

Purpose – To present and discuss a model of an Islamic management system based on religious values, as proposed by the relative recently adopted Malaysian Standard MS 2300 : 2009, Value-Based Management Systems – Requirements From An Islamic Perspective.

Methodology/approach - This paper makes a bibliographical study on the management approaches coming from Islamic countries. It can be a starting point in others future studies.

Findings – This paper shows a similitude between the “traditional” standard of management quality (ISO 9001) and other standard (MS 2300:2009) which takes in consideration the principles of the Islamic value-based management foundations.

Research limitations/implications – The research was limited by the available literature on islamic management, without relevant hard data about the results achieved in the implementation of this standard. The paper can be extended as statistical data on these results achieved in different Islamic countries are made available.

Practical implications – We may consider it as a good premise for its transfer and adapting on other cultures.

Originality/value – As there are no other papers or studies found, since its issuing in 2009, the paper contributes to a better understanding of new management approaches coming from Islamic countries.

Key words: value-based management systems, religious values, islamic management.

Introduction

In a globalized world, in which the distances between different cultures and economic systems, that decades before seemed to be separated by a huge gap, are now vanishing, making possible a dialog and a transfer of ideas, approaches and models, of that can benefit every part. In this context, on one hand, the western world has to face new challenges e.g. from the great infusion of Asian capital and high rate of economic growth of the Asian economies, and on the other hand, the social and economic systems being closed in themselves until yesterday, e.g. the islamic world, have to face the challenges that forced them to open to the world due to the penetration in these societies of all forms of digital technology [Sarji, 2007]. Moreover, the actual global financial and economic crisis puts again in question the redefining of the grounds we are rebuilding our society on, at least from the economic point of view. In this respect, according to some authors, the integration of ethical values in elaborating new economic and management paradigma will be in the future a fact of necessity, as “the economic framework which has been developed during the last three or four decades is unable to tackle the problem of the contemporary economic situation” [Zaim, 1989].

From its appearance in the 1980s, the management approach known under “Value-Based Management” is understood as “an integrated management control system that measures, encourages and supports the creation of net worth” [Ameels, 2002]. Since then, two streams of understanding had covered this term. First and accepted by the most, as a management principle focused on maximizing shareholder value. This understanding has been recently criticized based on the arguments that focusing only on shareholder value, the interest of third parties in terms of social aspects like employment, environmental issues, ethical business practices, customer interests or even long term interests of the business itself are overlooked. So, the criticism states that “the intrinsic or extrinsic worth of a business measured by a combi-

nation of financial success, usefulness to society, and satisfaction of employees, with all difficulties in determining the equivalent measures for usefulness to society and satisfaction of employees”[Wikipedia].

The Islamic model of a Value Based Management System for organizations

Model premises

As stated in the scope of the standard, the proposed model is presented in the form of a guideline containing certifiable requirements for organizations, in order to implement a management system based on islamic values, or religious values of Islam¹ [MS 2300 : 2009]. This makes necessary to point out at least some fundamentals of the Islamic worldview and its impact or influence on management thinking.

Firstly, the Islamic “Weltanschauung” starts from the acceptance and making compatible of the physical world (al-dunya) and the Hereafter (al-akhirah). The two aspects are interrelated being “two fundamental elements in which everything of the former aspect should be related in a profound and inseparable way to the latter’s” [MS 2300 : 2009]; accordingly, every deed, good or bad, in the worldly existence will have a certain consequence under the form of a reward or a punishment in the Hereafter. This dichotomy between good and bad was introduced in the Islamic Economics under the terms of Halal (lawful) and Haram (unlawful), being present in the production and consumption as well [Chaudhry,1999].

Secondly, it is about the Islamic view about humans. “Islam considers life of man as one and indivisible” [Datuk, 2009], or “there is no demarcation between the secular and the religious; human life is an organic whole” [Sarji, 2007].

Thirdly, the management of organizations from Islamic perspective is based therefore on the Islamic believes and practices, stating that the organizational objectives (both economic and non-economic) are “subservient to the larger purpose of human existence” [Sarji, 2007].

Finally, let’s review the few terms of which MS 2300:2009 makes use when speaking about Islamic value-based management foundations:

- Taqwa: godliness, devoutness, piety, God-fearing, pious abstinence and uprightness;
- Akhlaq: innate disposition, inner thought, feeling and attitudes;
- Itqan: to make things thoroughly or to dispose of things in perfect order, level of quality;
- Shura: principle of decision making process rooted in the Quran, based on mutual consultation approach.

Model description

Before describing in brief the components of the proposed value-based management system, the standard MS 2003:2009 is providing a model layout. The main components of this management model layout is focusing on human ressource (with its core

values and core purpose, both inspired from Islamic worldview) that being involved in management processes leads to achieve tangible and intangible results by the organization. The process is driven and controlled by a complex set of enablers and a so called “DAEI” methodology.

To make more comprehensive the proposed model we’ll make use of a firmly established simplified layout, like presented in [Simionescu, 2002].

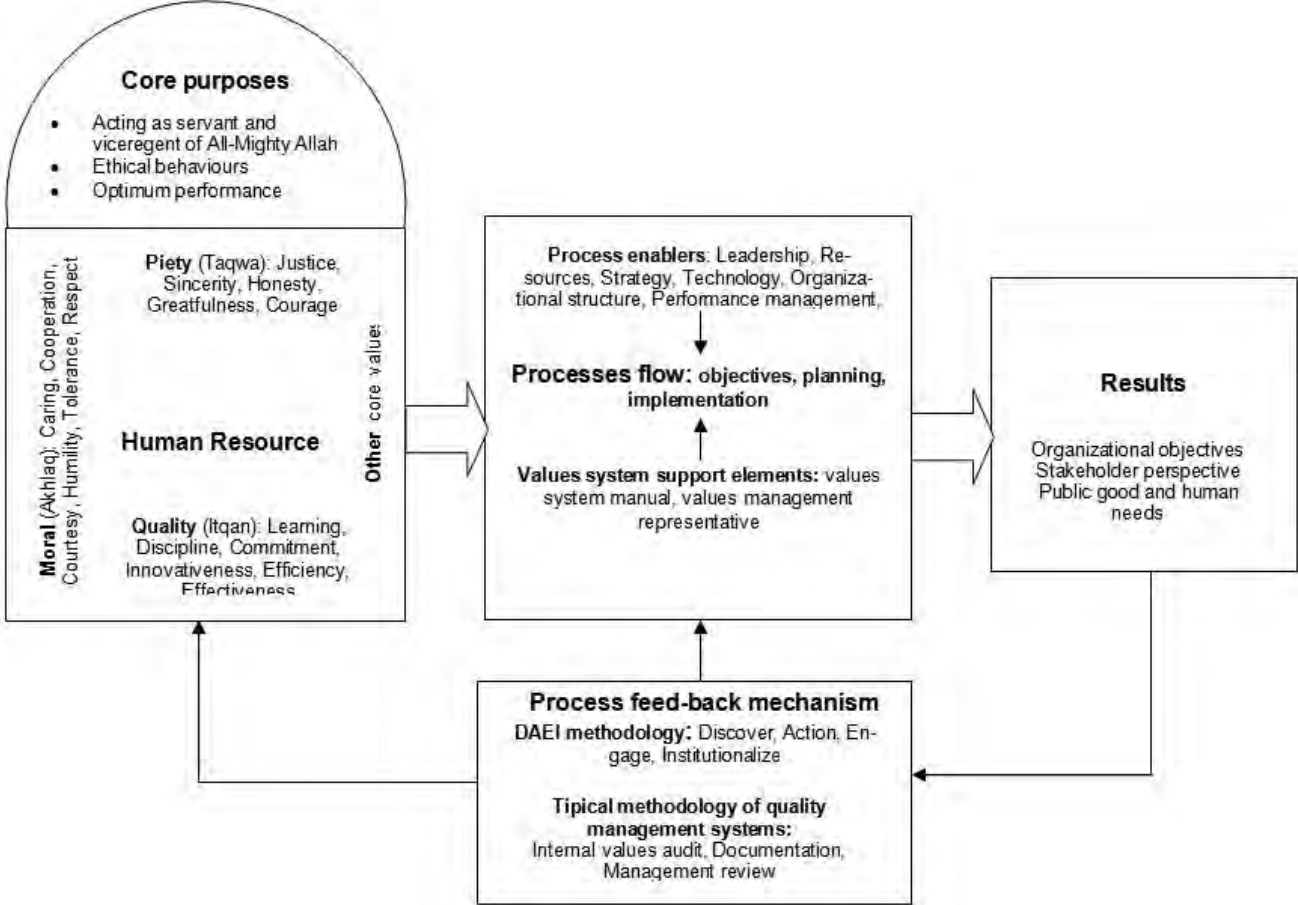


Fig.1. Value based management system layout

As described in the fourth chapter of the Malaysian Standard 2300 : 2009, the components of the proposed model of a value-based management system are as following:

- *Human Resource*, as the major organization’s asset and driver in reaching organizational goals under performance excellence;
- *Processes*, driven and facilitate by the use of a complex set of enablers and a innovative so called “DAEI” methodology;
- *Results*, in the form of tangible and intangible results, being actually in the same time, fullfilments of organizational objectives, stakeholders compliant, and serving public goods and humanity’s needs;
- *Internal values audit*, including those performed by independent auditors, as a part of a feed-back mechanism;
- *Documentation*, necessary in back-tracking the system implementation;

- *Management review*, at planned intervals, to ensure the systems continuous suitability, adequacy and effectiveness.

We may pay a special attention to the feed-back mechanism ensured by an innovative and so called “DAEI” methodology. This approach consists of four steps by determining at the “*Discover*” step the variance existing between planned objectives and the achieved results. Next step, “*Action*”, based on clearly defined situation and gathered, measured and analysed data, will lead to the diagnosis of the problem. The third step, “*Engage*”, consists of developing, implementing and monitoring of solutions. Last step, “*Institutionalize*”, means controlled conditions of the desired result is to be institutionalized along with the documentation of the gained knowledge. We have to notice also the insertion of the typical pieces from the methodology of quality management systems, like ISO 9001, represented by Internal values audit, Documentation, Management review. Another important notice deserves also the *Value system manual* (an content outlining is not provided by the standard) and the appointment of a *Value management representative*. The last remark has to be made on the insertion in the system of the training programmes. They have to cover values training, morale rejuvenation and DAEI methodology training.

Discussion and conclusions

As our research was limited by the available literature on islamic management, without relevant hard data about the results achieved in the implementation of this standard, we'll be restricted in our discussion just to emphasize some management principles found in the proposed value-based management system model, then to see how is the Value-Based Management in this standard understood, and finally to determine the islamic elements contained in this approach.

Management principles

So, speaking about management principles contained in this model, we found out the presence of the strategic management elements by defining the organization's mission and objectives, based on a vision, when describing the necessity of defining and developing a *value policy* and *value objectives*. The need of a strategy formulation is also mentioned, but as an element of the process' enablers (see Figure 1). As the key words “vision” and “mission” are further just mentioned, as a task of the leadership, and to be compliant with the personal values system, we may assume in this respect that the vision is linked with achieving a good governance, effectiveness and efficiency of the organization by focusing on the employees, that are “acting as servant and vicegerent of All-Mighty Allah... demonstrate ethical behaviors in all undertakings and achieve optimum performances through all levels”[MS 2300:2009].

Some classical² functions of management are also present. After speaking about policy and objectives, the standard describes the planning function and referring the coordinating function it is presented as a step in the planning process. Next, the management function of organization, with its goal to establish an appropriate organizational structure is also provided by the standard, but in the chapter of the system's process, as an element of system's enablers (see Figure 1). Then, the evaluation-control function is implicitly mentioned when speaking about the duty of establishing

some evaluation tools under the form of a values evaluation plan and procedure. Other management principles refers to leadership, seen as leading by example, or to the necessity of setting priorities of the stakeholders needs.

Value-Based Management concept

Above all, it important to determine first in which way the approach make use of the Value Based Management term and second, as mentioned in the Introduction, if it is assuming the shareholder or the stakeholder point of view.

Now, the reference to one sense or another of the Value-Based Management term is made clear when speaking about the expectations and benefits should be achieved by the model's implementation. So, first, the insertion of religious requirements in the organization's quality management practice which are promoting good universal values are expected to be readily acceptable to all. Second, by practicing universal good conducts at all levels of organization it is expected to reach higher levels of productivity, quality of goods and services and to enhance efficiency and effectiveness. And third, it is expected to reach higher levels of compliance and confidence among all stakeholders. Stakeholders are this time mentioned clearly. This statement leads us to the second expected answer, i.e. the present value-based management approach focuses on stakeholder's interestes, rather than of the shareholder's. An important notice that has not to be overlooked is that among stakeholder, it is mentioned also the "all-Mighty Allah, as the highest stakeholder". This statement is of huge importance, as His involvement in the interest game of the stakeholders, brings at least the interrelation with the Hereafter concept and the whole set of God's commandaments. A last notice has to be payed on the frequency the term *values* (and not value) is by the standard in building-up the "bricks" of the proposed model used. For a better understanding, it should be first formulated the meaning of the term in the spirit of the standard, so, it's about "beliefs of a person or social group in which they have an emotional investment (either for or against something). One may meet this term in denotating as Islamic values, human core values, values policy, values objectives, values planning (process), values requirements, practices and resources, values implementation, values evaluation plan and procedures, values system manual, values management representative, values activities, values system, values training, internal values audit, values evaluation report, i.e. over fifteen terms containing the "*values* magic word". Perhaps it represents an deliberate approach, i.e. to inspire the whole value-base management system model by the Islamic beliefs and practices, and so we may step forward to the last section of our discussion.

Islamic elements of the management system model

Maybe the most interesting aspect of the Malaysian Department of Standards approach in establishing a value-based management system from an Islamic perspective is the way in which religious elements interfere and interweaves with the requirements and key aspects of a management system as it is seen and understood in the western organizations.

In this respect, we found some elements that deserve a more attentive look. Firstly, we think in every approach, including management, it is important what is the refer-

ence the approach is relating to. It could be the shareholders or the stakeholders, the customers or the market, or even the employees. Starting from the notice that we hope will be agreed of all, that we have here a maximizing stakeholder value approach, and if we prioritize the stakeholders, it is of evidence the presence of Al-Mighty Allah, as the highest stakeholder. This observation has to be also linked with the Islamic concept of Economics according to which God is the real owner of everything in heaven and on earth, the position of man being that of a trusty and a beneficiary [Chaudhry,1999]. This concept infuses obviously the core purposes of the standard. Secondly, it is about considering as an act of worship (ibadah), mentioned explicitly in the standard. Thirdly, it is about a practical aspect of the personal and organizational behaviour, based on the above mentioned core values. Looking at them more closely, they appear as a ethical values mix, not only of religious origin. Not at least, it is important to mention the Islamic mutual consultation approach or principle known under the term of shura, mentioned as to be practised when defining and developing value policy, but it can be well extended to all levels of organizational strategic elements, i.e. along with defining the mission, strategies, objectives, etc [Simionescu, 2002].

Conclusions

We found very attractive the idea to promote religious beliefs and practices in the management of organization, not only under the form of business ethics, but also in an integrated approach like this Value-Based Management System Model From An Islamic Perspective. Nevertheless, on our opinion, in the absence of the relevant hard data about the results achieved its implementation, it still remains a theoretical approach whose applicability has to be confirmed by the organizational management practice. From this point of view, the paper can be extended as statistical data on these results achieved in different Islamic countries are made available.

Analyzing the content and outlining of this standard, its origin from the quality management standards is of great evidence. Far from being this a disadvantage, we may consider it as a good premise for its transfer and adapting on other cultures. We may add also that it layed not in our intent to make a comparative analyze based on the major world religions, that could be the aim of another paper.

The teachings promoted by the malaysian management system justify us to consider that the presented model of MS 2300:2009 would fit in a so called "spiritual approach on management", and it's quite different from the known spiritual management. The "spiritual approach on management" is not denying the findings of the scientific management school, as it is asuming its genuine management principles, it does not decline the ideas of the beaurocratic management school, as it it assumes for instance the pyramidal hierarchy, and it accepts as well findings of the behavioral school as it considers human behaviour, based on moral values, an important factor in reaching effectivness and efficiency of organizations. In another sense it's a systemic management approach because its view is an integrated one, looking on earth and heaven like a whole. And we could continue, but for the sake of arguments we'll stop here. This approach will be developed in another paper, but we may draft at least a few cornerstones such a "spiritual approach on management" covers:

- earth and heaven are interrelated, being parts of a same whole;
- based on the above postulate, speaking about the interested parts in organization's management, God has to be also included as one of the stakeholders, and therefore playing in this game a certain role, at least like any other of the stakeholders;
- humans are also spiritual beings, so that a mechanic view on them is not able to provide a comprehensive understanding of their motivation, behaviours and actions, and above all, their success in reaching efficiency and effectiveness, the moral values being an intrinsic foundation of their spiritual part;
- management and leadership principles, models, methods, and techniques are more or less inspired from a genuine set of knowledge of divine inspiration, their diversity being determined by who, under what circumstances and purposes are put in practice.

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Notes

¹ In the entire standard there is nowhere mentioned the term “Islamic religious values” but only “Islamic values”. For an European reader it is preferred to make such addition, though even according to the European literature it is accepted that “Islam operates like a whole, being in the same time religion, political, social and cultural organization, civilization and lifestyles” [Istocescu, 2004].

² According to H. Fayol: forecasting, planning, organizing, commanding, coordinating, controlling, or planning, organizing, leading, staffing, controlling by other authors [Simionescu, 2002].

**Some Aspects of Ethics in Some Universities of Iași,
Romania**

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Abstract

Purpose – To examine ethical issues existing in Romanian universities, as well as factors influencing unethical behavior of individuals in higher education.

Methodology/approach - Starting point of approach was reviewing literature defining concepts and finding the current state of knowledge in the field. As a basic method to get an evaluation of the facts of ethical issues in universities in Romania, was the method used questionnaires that meet predetermined objectives. Research was done at the Universities of Iasi, answering questionnaires about 500 people: students and teachers. Based on the results obtained from the analysis of questionnaires were designed graphics, interpretations and conclusions.

Findings – Although, compared with 20 years ago, now all universities have a code of ethics, ethical issues are not lacking in Romanian universities. All of these ethical issues present in the universities could be an impediment to enhancing the quality of teaching, research, and education of universities.

Research limitations/implications – Limits of research are: limiting the validity of conclusions from the case studies presented, the small number of subjects is inappropriate presentation of statistical significance of results.

Practical implications – Implications: Improve quality management in higher education in Romania, a better ranking of Romanian universities compared to other universities abroad.

Originality/value – Develop solutions to improve the ethical management of universities.

Key words: Ethics, code of ethics, factors.

Introduction

Designation as a philosophical discipline concept of "ethics" was first used by Aristotle. The concept Aristotle intended to designate all the customs and traditions of men. Ethics is important to note that the center had already been moved once philosophical discussions with the advent of Socrates. [<http://ro.wikipedia.org>].

Ethics encompasses the human life to a certain direction, character, habits and morals. It is inside a person, as a result of his own reflections and choices. [Daniela Tatiana Corodeanu- "Ethics in public administration", 2007].

All universities in Romania have been forced to adopt codes of ethics until December 2005, according to a decree of the Minister of Education.

The draft code of ethics for university, developed in 2005, promotes the ten values and principles: academic freedom, personal autonomy, justice and equity, merit, professionalism, integrity and intellectual honesty, transparency, respect and tolerance, responsibility, kindness and care. Project authors believe that the university must respect the dignity of each of its members and promote academic integrity [<http://www.9am.ro/stiri-revista-presei>].

According to an order of the Ministry of Education, to promote professional ethics in universities, academic

Ethics code should include explicit formulation of the ideals, principles and moral norms that agree to respect and follow the academic community members in their work. It sets standards of professional ethics that a university community seeks to follow and penalties that may apply for breaches thereof.

Code of Ethics university must function as a moral contract between students, teachers, administrative staff and university community as a whole, enhancing the cohesion of university members and the formation of a university environment based on cooperation and competition by fair rules, increasing the prestige of the university. [<http://www.9am.ro>].

Status of ethical management of Romanian universities has been completed and other studies. A study of ethical issues in higher education was created in 2005 by a group of graduate students of the Faculty of Political Sciences of the National School of Political and Administrative Studies (SNSPA), Bucharest, coordinated by Professor Mihaela Miroiu. According to this study, favoritism, politicization of education, sexual harassment and bribery were the main gaps in higher education in Romania. Research led to the realization of the first draft ethical code for universities, which the Ministry of Education presented as a master plan, after which each higher education institution had the obligation to prepare their own documents, depending on features, year end 2005.

Another research on about ethical management in universities, carried out by CCEA - Research Center for Applied Ethics University of Bucharest, which resulted that Romanian universities are in compliance stage of the evolution of ethics management (a further stage of development ethics declaration, which is not necessarily to follow ethical code).

This paper aims to research ethical issues facing the Romanian academic, research into factors influencing unethical behavior, and improvement factors of ethical behavior in higher education.

Research methodology and results

Research was done at the Universities of Iasi, answering questionnaires about 500 people: students and teachers. To do this research were used two questionnaires, for teacher questionnaires, and questionnaires for students. The questionnaires were divided to be completed directly in college, and the Internet.

Based on the results obtained from the analysis of questionnaires were designed graphics, interpretations and conclusions.

After analysis of questionnaires, according to answers, all universities where research was done have a university code of ethics. The existing code of ethics in the universities, know less than half of students surveyed (37 percent).

The main ethical issues, facing the Romanian universities, in the opinion of students, are illustrated in the following chart:

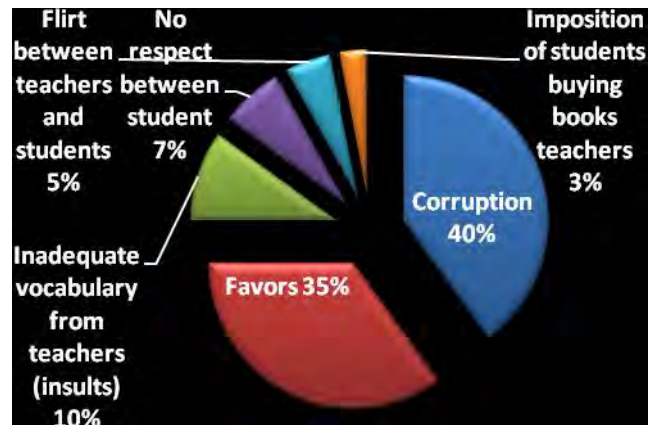


Fig. 1. The main ethical issues faced by Romanian academics, the students view

According to students who answered questionnaires, the most important issue of ethical is corruption. In second place was favoritism, as an important issue within universities. Runners, according to the percentage obtained is situated: inadequate vocabulary from teachers (insults), no respect between students, flirt between teachers and students and last, 3 percent of students are frustrated that some teachers require them buy books. Ethical problems of the second category of respondents, namely teachers, are different from those of students. Academic teachers claim that these problems are most frequently found in universities in which they operate:

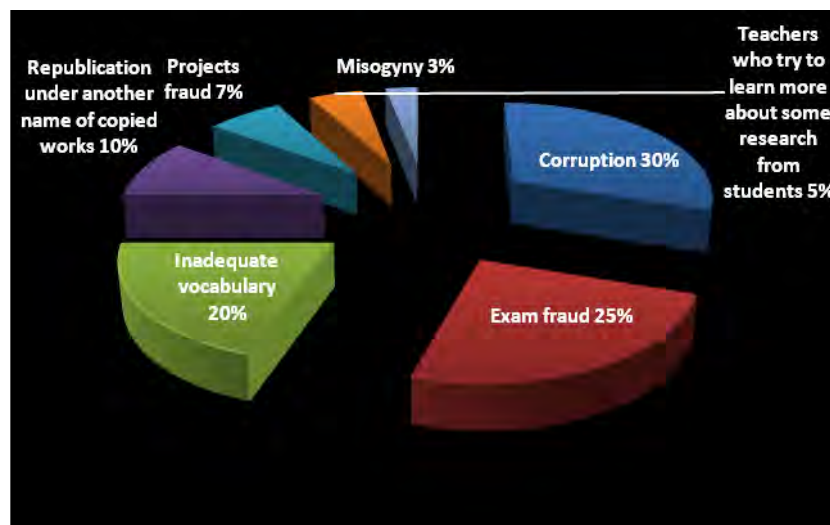


Fig. 2. The main ethical issues in Romanian universities, in the opinion of teachers

Comparing the two graphs, we see that in both charts: students and teachers' chart, corruption is as important issue, mentioned by most of the teachers who answered the questionnaires, but other places, are occupied by different issues than those of students. We observe also that teachers do not claim favoritism as problems encountered in universities where they work, the problem who is in the top problems mentioned by students. Runners as ethical problems, in the opinion of teachers, is exam fraud, inadequate vocabulary, republication under another name of copied works, projects fraud, teachers who try to learn more about some research from students, and a 3 percent of teachers who answered the questionnaire, saying that misogyny is among the ethical problems of universities.

On the basis of ethical issues present in universities, is a number of factors influencing unethical behavior of individuals. These factors, according to students' responses are shown in the chart below:

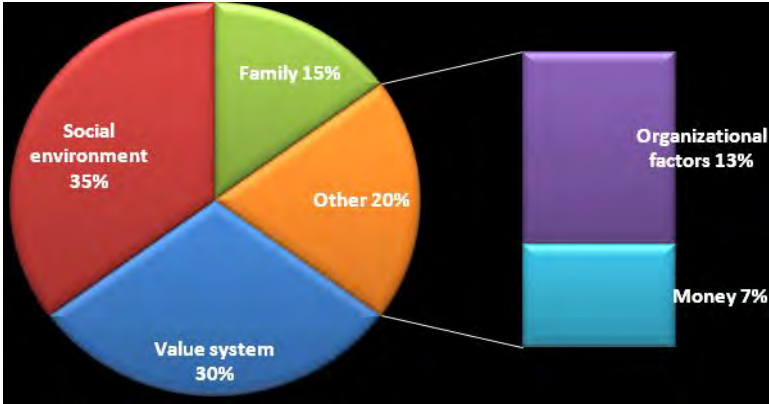


Fig. 3. The main factors influencing unethical behavior in higher education, students view

We can see that most of the students who answered questionnaires, advertising as a factor influencing unethical behavior in academic environment, social environment in which the individual increased. 30 percent of respondents say that the value system of individuals is an important factor influencing unethical behavior. Other factors mentioned by students are: parents and family, organizational factors and others mention money, as a factor influencing the behavior of individuals.

Around the same way they responded and teachers, they mentioning in addition to students as a factor which has influence on unethical behavior of individuals, permissive legislation.

Next, we tried to find both, the students and teachers, which would, in their opinion, factors, measures, solutions, which could lead to improved ethical behavior in universities. In the opinion of students who responded questionnaires, these factors are presented in the chart below:

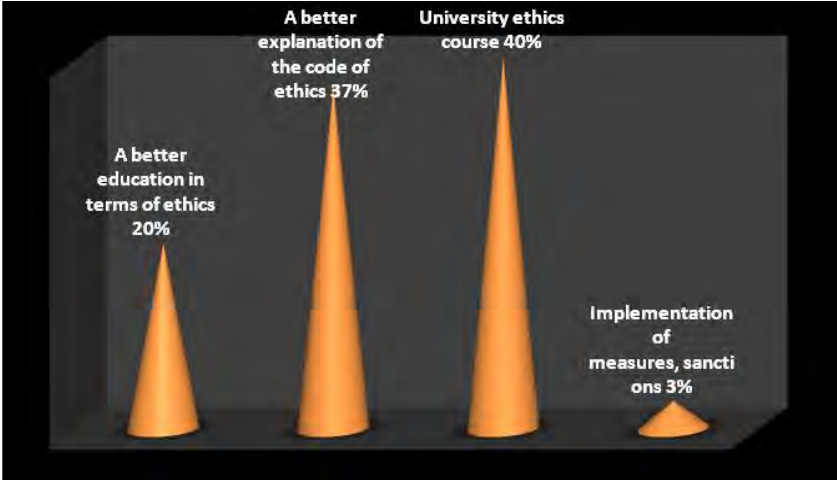


Fig. 4. The main factors that could lead to improved ethical behavior in universities, in the opinion of students who answered questionnaires

Most students, who answered questionnaires, believe that one factor that could lead to improving the ethical behavior of universities could be an ethical course provided in universities, for teachers and students. Others believed that a better explanation of the code of ethics currently in university and penalties for failure to observe ethical standards, which could lead to better behavior in the university. Others said that a better education in terms of ethics (university staff participation in ethics training or other programs for this purpose), could have a positive influence on the behavior of individuals university. The fewest said that individuals could change their behavior if such measures and sanctions applied when ethical principles would be violated.

According to teachers who answered questionnaires, these factors are presented in the chart below:

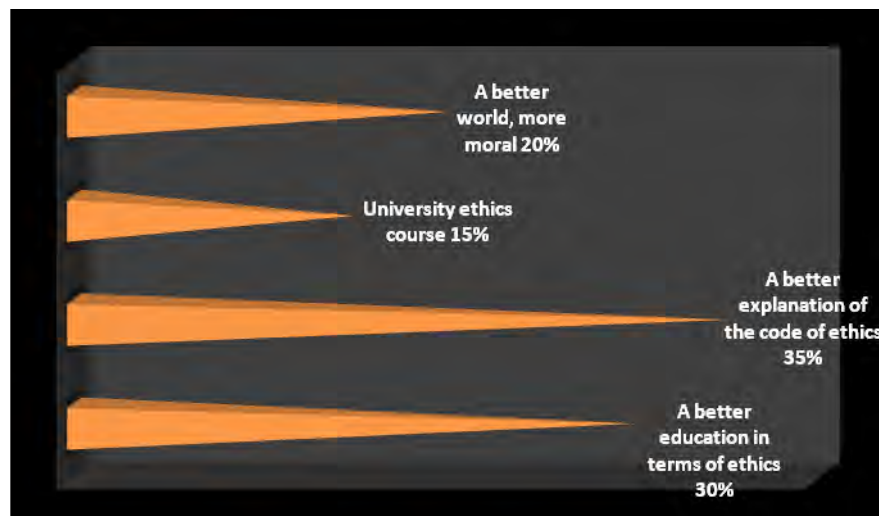


Fig.5. The main factors that could lead to improved ethical behavior in academia, in the opinion of teachers who answered questionnaires

In the two graphs above, we can make the difference between the responses of students and teachers. Among teachers who answered questionnaires, most, they believe that a better explanation of the code of ethics in the university today and the measures provided for failure to observe this could lead to better behavior in the universities, while that most of the students said that one factor that could lead to improved ethical behavior in university could be an ethics course provided by the universities, both for teachers and for students.

The next factor identified by teachers who answered questionnaires is represented by a better education in terms of ethics; this is done by university staff participation in training of ethics or other such programs. Another factor that may influence ethical behavior of individuals in universities, in the opinion of teachers who answered the questionnaires, the world is a better, more moral that we are born and grow from childhood. Basically, these teachers have lost hope that something can be done in terms of ethics for the present, in terms of ethics education should be done since childhood. A 15 percent of teachers said that an ethics course provided by the universities, both for teachers and for students could be a solution for improving the ethical behavior of individuals in universities.

Discussion and conclusions

After analyzing the questionnaires, we built these conclusions about the ethical management of universities in Romania:

Ethical issues are not lacking in universities in Romania and among the most frequently recalled by respondents (by teachers and by students) include a problem with a high degree of concern, namely: corruption.

Although all codes of ethics in the universities to do research, provide prevention and combating all forms of corruption, favoritism, most of the students who answered questionnaires, have mentioned these problems as existing within universities.

Following the results, including the problems mentioned by students and teachers, is found inadequate vocabulary too, disrespectful and ugly statements, though, to develop codes of ethics in the universities studied is to support and develop a climate of respect mutual trust, courtesy, cooperation.

The main factors influencing unethical behavior of individuals, as they answer questionnaires, are: increased social environment in which individual value systems, family, Organizational factors, money and permissive legislation.

All of these ethical issues present in the universities could be an impediment to enhancing the quality of teaching, research, and education of universities.

To improve ethical behavior in university, as shown in research done, the best solutions in view of students and teachers, it consists of: a course in ethics provided by the universities, both for teachers and for students and a better explanation of the code of ethics in the university today, and apply the sanctions provided for failure thereof.

Other solutions to improve ethical behavior in academia could be: a better education in terms of ethics, this is done by university staff participation in ethics training or other programs in this or a better education in the sense of ethics still childhood.

The results of this research will help to: improve the ethical management of universities by improving existing codes of ethics in universities and a better explanation of their academic among individuals, or by using other methods in terms of ethics education (introduction of ethics course for both teachers and students, university staff participation in various training programs in the sense of ethics).

Limits of research are: limiting the validity of conclusions from the case studies presented, the small number of subjects is inappropriate presentation of statistical significance of results.

Future research may be considered include the analysis of universities in several regions of the country and differentiating results by type of universities (private universities or public universities).

Acknowledgement

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The Results of Development Strategies Applied by SMEs in Timișoara in the Last 20 Years

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Abstract

Purpose – The work has the purpose of comparing the development strategies applied by the 4 Timisoara based firms along the 15 years that passed from 1990.

Methodology/approach – The methodology used was observation, discussions and interviews with those directly involved in the businesses.

Findings – Through this research we have found that there are both pure strategies as well as combined ones, and the passage between them is mainly influenced by the external environment.

Research limitations/implications – Research was conducted over a period of 15 years. Collaboration with the managers involved in the firms was professional. We developed specific consultancy and/or training for each of the 4 firms presented.

Practical implications – Realizing a direct link between the managerial and decisional potential was the first practical problem had. Also, the information that a firm has can greatly influence its decisions, as can be seen in the following.

Originality/value – Comparing theory with practice and verifying existent theories applied by Romanian firms is the principle added value. The Romanian economical environment has sufficient examples and case studies that can be utilized in scientific and academic purposes.

Key words: Development, strategy, management.

Introduction

The beginning, evolution and development of the firms that have appeared in Romania after the 1989 revolution is extremely complex and diverse at the same time. Whether we are talking about a clear strategy or a momentary adaptation to the demand of the economical environment, the firms' evolution depended, first of all on the decisions taken by their respective managers. According to these decisions the firms have managed to grow, develop, be bought by competitors or go bankrupt.

In this paper we analyze the evolution of 4 firms in Timisoara, from 4 different activity fields, that started up at the beginning of the 90s and that had interesting developments. The research in this paper has been done over the course of 15 years, through discussions, phenomenon observation, and interviews had with the people directly involved in the running of the four businesses taken as an example. The study has been made through the direct implication of the first author in the evolution and development of the firms taken as an example.

Presentation of the business's evolution

The evolution of the 4 firms will be further presented.

1. The firm "Marcadi SRL"

The firm "Marcadi SRL" was founded by Adrian and Lia Popescu in 1991 [Mocan M, 1998]. The Popescus worked for the Guban firm in Timisoara in the creation department. The Guban firm was renowned at that time for its women's shoes and leather handbags. The products were mainly made for export and they had a very good name both outside and inside the country, though they were difficult to find in Romania.

In 1990 Adrian Popescu was sent by the firm to a 3 month training course in Bucharest. Upon his return, more due to his hobby and passion mister Popescu started producing handmade shoes that he tried to sell to friends. His products quickly found customers. On the other hand misses Popescu started to create bags that she sold to friends and acquaintances.

Seeing that their products sold easily, in 1991 the Popescus had the idea of opening up their own business. Because shoe producing technology required a more expensive technology, for the beginning, they just started selling purses. The firm realized its production in a 12 square meter room, having only the necessary equipment for it. The initial personnel were composed of the two and another person. After a few months, from the money they earned from making handbags, the firm managed to buy the necessary equipment for shoe making. Also, they rented an added space and started their women's shoes production.

The business went well but suffered from the dispersion of the resources and locations (the shoes were made in one part of the city, in the newly rented space, and the handbags in a different place). The most difficult part was matching shoes with handbags, because they required the same materials.

In 1992 the firm participated in an auction for a space given by the Town Hall, that it won with the rent of 3620 lei/sqm after the bidding started at 100 lei/sqm. In comparison, in the same period, a shop in the center of the city was rented with 200 lei/sqm. After winning the space the Popescus started furnishing it. They redid the walls, the roof, added 3 phase current, water and a central heating system. The arrangement of the space was necessary, but it spent almost all the firm's liquidities. In the end the firm had the necessary space, but not the equipment necessary for the whole surface, nor the money to buy it.

The two owners then turned their attention to lohn contracts, their own production being slim, and sold at their own representation shop at the entry in the factory. Through a lohn collaboration the Marcadi firm supplied the clients with workforce, the rest being up to the client to have. He managed the raw material, the distribution and selling of products on the western markets. The advantage to this type of contract was that the Marcadi firm did not handle supply (saving money) or selling (having a client that took all they produced). The business was easier and more manageable. The associates only had to think of ways to produce more with lower costs and not the other parts of the business.

The disadvantage to this type of collaboration was that the firm depended on a small number of clients (only in this case 3) and could not develop its own brand, models, or produces (not knowing the external market).

Taking advantage of the inflation rate and the fall of the "lei" and the fact that the business ran mostly on export, the firm developed, reaching a number of 150 employees in 1998 and a steady stream of orders. The technology and equipment needed were brought in by business partners, being compatible with the type of production done. The number of orders grew, but so did the competition. Also, out of the 3 clients, one reached a total volume of 70 percent out of all the orders.

In 2001 the Town Hall put the space that the firm was based in, out for sale. Although the price was high Marcadi bought the place through a very big bank loan, thus spending all its liquidities.

Starting with 2001 other problems appeared in the external environment that affected the firm, such as:

- A greater stability of the exchange rate
- Appearance of Asian products on the European market
- Growing salaries
- Migration of the local work force to Western Europe (Italy and Spain) especially after no visa requirements
- Stricter regulation in regards to economical activity, increased exterior restraints (environment, work security, health, etc)

Starting with the second part of 2003 the firm's activity started decreasing. The main reasons were:

- The firm acquired a large amount of raw material that contained defects, and the acquisition was made before the defects were spotted
- The workers demanded higher incomes for the same amount of labor
- The firm's liquidities decreased, partly because of the acquisition of the space, partly because of a lacking financial management
- The production series were smaller which meant a greater use of auxiliary time for setting up the machines and introducing the new series.

Problems started getting so bad that Marcadi was on the brink of bankruptcy. Associates stopped the production and started trying to find another means of survival.

After careful analysis they decided that by the end of 2004 they should sell the entire firm, together with the space, in order to pay off their debts and to still have a small amount of money to start a business in tourism.

2. *The firm "JOE IBC SRL"*

The firm "JOE IBC SRL" started up in June 1994 in Timisoara, by Florentin Banu and Vasile Chiriac, that decided to produce waffles in Romania, because of the increased demand on the market and the competitive production prices. Production started on the first of October 1994, using for a first phase semi-finite products imported from Austria. These were available by means of an Austrian partner of mister Banu, in the period that he had left in Austria (immediately after 1990).

In only a few months, at the end of 1994 the company had a stable activity and appreciatively 30 employees. The business took off fast. At the end of 1995 the company had a portfolio of 3 products, and its distribution channel included most of the western part of the country, but also Bucharest. In 1996 JOE IBC moved to another location bought at the edge of the Timisoara municipality and bought new equipments, starting to produce all products in Romania based on bought raw material and the firm started to sell in Germany as well. The selling and distribution network was one of the most powerful in the country.

At the end of 1997 the company was organized with a complete structure of personnel and departments that covered the whole of the internal market and exported to 16 countries. In the year 1999 the firm Joe IBC was already a market leader in Romania, having a turnover of 14,6 million dollars and over 400 employees.

In that moment, after an analysis of the existent situation and establishing strategical objectives for development, it was established that if the firm was to be competitive it would need new equipment, new products and new markets.

An important element appeared when the associates received an invite to sell the firm from a powerful competitor— Nestlé. This fact was anticipated by the founder of the firm, ever since the business started.

After a careful analysis of the offer the associates decided to sell their social parts to Nestlé and invest the money in other businesses. They invested much of the money

they had gained in the supermarket chain Artima, that they sold in 2005 to the investment fund Enterprise Investors (after in 2003 they co-opted as minor associates in a different investment fund).

3. *The firm “Grafoprint SRL”*

The firm “Grafoprint SRL” appeared on the market in 1991 being founded by a group of friends that identified a demand on the market. Radu Dimeca, Verba Silviu and Oscar Manto released in March of 1990 the crossword puzzle magazine “Cocktail Enigma” that, being the first of its kind in Timisoara had a huge success. The problem they encountered was that the state run printing shop did not honor its contracts in time and their services lacked in quality.

The three friend sought help from a colleague that had moved to Germany and that financed them to buy printing equipment. With this, the three opened the Graf print firm in 1991 and entered the business as equal parts associated, the friend from Germany also being an experienced accountant.

At the end of 1991 Grafoprint becomes the first supplier of standardized forms, printed on auto adhesive paper in the western part of Romania.

In 1994 the firm buys a printing equipment with the help of a Phare program, in 4 colors that prints continuously, through which it conquers a big part of the specialized market. As it gets to 1995 the firm has 31 RENEL branch clients and 3 companies that bottled Coca Cola.

In 1998 the firm is accredited by the Ministry of Finance to produce fiscal forms with special regimes. The firm grew to have a turnover of millions of Euros annually and won a multitude of prizes and distinctions at county and country level.

The firm’s management was extremely perform ant due to the professional upbringing of general manager Radu Dimeca (that was one of the associates) as well as because of the complementary nature of the 5 associates. This diversity was seen as positive until the moment when the 5 saw different ways in which the firm should evolve. On one side there was Radu Dimeca (general director), Verba Silviu (sales director) and Liviu Poinariu (the friend from Germany) and on the other side Manuil Holotescu (economical director) and Oscar Manto (production director). The first three thought that an extension of activity and garnering of new domains was imperious, while the others thought of sustaining the existing market and focalizing on it. In the end, the first three bought out the other two and applied the strategy they themselves proposed.

The firm constituted a new part in their building in 2003 and bought new equipment to produce self adhesive stamps for the food industry in 2004. The firm’s turnover in 2009 reached 3 million Euros.

In 2010 the firm relocates to the outskirts of the city, in a new space, the old one being in a rather central location that they wanted to sell.

4. *The firm “Greenforest SRL”*

The firm “Greenforest SRL” was founded in 1992 by 3 friends, Ciprian Osan, Cristian Florea and Adrian Sarbu that identified the opportunity of good business. The 3 had recently finished the Informatics technology Faculty in Timisoara and begun a firm of assembling and distributing computers to firms in Timisoara. The problems with which they were confronted was the lack of furniture specifically made to host the computers they made.

Starting from this necessity the three friends started the firm Greenforest and rented a space where they started production. At first they built mediocre equipment from their own projects and in small quantities.

The three shared their jobs thusly: Cristian Florea was general director, Ciprian Osan was production director and Adrian Sarbu was the commercial director.

In 1995 the firm won financing from Phare with which they acquired a new production line and introduced the offer of custom made cabinetry for clients, at their wished style and price. Also, they bought a space at the outskirts of the city and developed new product lines. They also started selling complementary products - ergonomically chairs.

At the beginning of the year 2000 the firm started producing a new type of furniture destined to different utilizes:

- Kitchen furniture
- Hotel furniture
- School furniture
- Furniture destined for cruise ships

They created their own new collections and tried to attain new markets in The Republic of Moldavia, Serbia and the Czech Republic.

The furniture created by the Greenforest firm is high quality and durable, its durability being verified over the years. The market segment that the firm addresses is high quality business.

Comparison between the analyzed firms' strategy

In academic literature [Mocan, Epure and Mocan, 2008], it is shown that the strategy of a firm can be put into one of the 4 major categories, these having more alternative strategical undergoing.

1. Growth strategy through which the growth of sales is expected by attaining new markets and launching new products
2. Integration strategy that follows the stabilizing of the distribution chain and assuring the prime materials at reduced costs
3. The diversification strategy that follows the enlargement of the product portfolio, either by buying or creating new products through personal research
4. Reduction strategy that is done by reassessing the position and activity of the firm in order to regroup it after an overexaggerated extension

Analyzing the Marcadi SRL firm it is plain to see that it chose the fourth strategy and closed the business. They got to this particular situation by means of both internal and external factors, like the miscalculation of budget and cash flow, as well as liquidities, and mistakes in supply, organizing and marketing. The two associates often had different views on the running of the business.

In regards to Joe IBC SRL they initially picked the third strategy with an alternative of market expansion. Expanding on different markets was necessary for volume products such as the ones Joe produced. This strategy was taken actually by Nestlé as well, after the multinational bought out Joe IBC. The founder of Joe IBC knew very well when he should have fallen back and when the firm's value on the market got to a point where selling it was favorable.

Grafoprint SRL picked a growth strategy with the alternative of market share and that of concentrically diversifying through which it added new produces to the one initially had. It exploited the market to the maximum potential and was always one step in front of the competitors.

Greenforest also applied a growth strategy as Grafoprint did, but combining it with a diversifying strategy. The quality of the firm's products offered them an important position on a country wide level in regards to office furniture creation, the firm being considered for all major market studies done for this type of product in Romania.

Conclusions

Out of the studied cases the firms Joe IBC, Grafoprint and Greenforest were professionally run according to all existing managerial theories. The managers (that established the firms) took part in trainings, both in Romania as well as outside the country and took maximum advantage of the market's opportunities. The owners of Grafoprint and Greenforest had been active in organizations such as the Chamber of Commerce and entrepreneurial organizations and had applied for European funds, winning more projects during the years.

We can firmly say that the 3 firms were success cases.

In regards to Marcadi SRL internal problems that were not solved in time aggravated once the external market was no longer as favorable. There wasn't a correct decisional environment, the two partners often having different points of view. Once the business environment matured, the complexity of the problems associated with the business managed to surpass the analysis and decision making capacity of the 2 associates.

An important phenomenon took place with the two remaining firms on the Romanian market. At Grafoprint the associates retired from the executive ruling starting with the year 2008, hiring instead professional managers.

Greenforest brought a new member into the team, specialized in quality and marketing which brought a refreshing impulse to the firm.

The former associated of the Marcadi firm turned their attention to a small business in tourism.

Mr. Banu the owner of Joe IBC is involved now in businesses from automotive industry and construction.

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Managing Innovation Systems in Post Communist Countries. Case Study in Mures Region, Romania

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Abstract

The purpose of the field study is to explore whether there are intensive linkages and networks between the Education Institution and Productive Sector. More specifically, we examined if the firms make common innovative projects with the University.

Inside the boundaries of our research, data was collected at one level: firm level. Apart from the general background and contextual information, the questionnaires were designed in order to identify the existence of university-firm linkages; as well as types of co-operation, motives for cooperation or reasons for non-cooperation. Statistical and descriptive analyses of the information collected throughout the questionnaires provide the basic and general indicators about the mobility of labor and firm-university relationships.

The survey firms belong to Mures Region and were chosen randomly. From the whole number of surveyed firms, 94 percent can be considered as micro and small size regarding the number of employees. Only 6 percent of the surveyed tenant firms reported to have more than 50 employees.

This paper is strongly linked with the overall theme of the conference due to the fact that the innovation systems in all the sectors including management, is a important factor that help the country to grow and to increase their productivities and competitiveness.

Key words: *innovation, cooperation, research*

Introduction

Innovation is the key to productivity growth and prosperity. The objective of this study is to fill this gap in the research and analyze the determinants of innovation in a transition country, Romania, Center Region.

Concepts of technology, knowledge and innovation play huge importance in today's theoretical and practical world. Their importance in every aspect of human's life is evident from the beginning of the civilization. Understanding these concepts is crucial in order to understand new collaborative strategies for the firms that struggle to survive in rapidly changing environment that created global markets and global economy. In present, creation of technological innovation, its diffusion and adoption are being central to the economic development.

Technology is a dynamic process that changes continuously and innovation is a complex, social activity. Technological innovation is not an isolated instance [Castells, (1996),37], for a new technique and/or product to be implemented, company has to interact with its environment that is comprised of competitors, partners, universities, research centers, suppliers, public authorities, etc. Innovation itself is becoming more expensive and often more risky than before and there is now greater inter-firm collaboration and networking in innovative effort [Lall, (2003), 3].

1. Innovation: Building the Economy of the Future

Innovation is an old and, to a degree, an obvious concept. Mankind has known since the invention of, say, the wheel that new ideas can be shaped and deployed in ways that advance human happiness and prosperity.

But innovation has become a focus of intense analysis in public policy circles in recent decades — as we've grown in our understanding of the critical mass of intellectual and research power needed to come up with truly new ideas in an advanced society, and as we've watched the fruits of those ideas span the globe with accelerating speed.

The leaders of states across Europe increasingly see in higher education their best hope of capturing an advantage in this new innovation economy.

Technical University from Cluj, looks to university-led innovation as the way out of an economic meltdown caused by the collapse of its traditional industrial base. Petru Maior University from Targu Mures has wrapped together a tight and coherent program that combines new research infrastructure, assistance to entrepreneurs, and customized training programs to help employers upgrade their productivity. Transilvania University from Brasov is talking about releasing its university system from the restrictions that have kept it from changing as fast as the world around it.

2. University-Firm Linkages

Cooperation between the firms and knowledge institutions, namely universities, is perceived in the literature as highly important and beneficial. This is due to the fact that knowledge centers serve as a means of disseminating research, providing services, and educating and training future workforce [Cuerco-Garcia et al, 2008].

Smith and de Bernardy [2002] assert that universities are: a) source of highly skilled labor (i.e. they supply graduates, they train the existing local workforce through continuing education departments, and they attract highly qualified workforce from outside); b) source of new firms (i.e. they provide ground for university spin-offs and encourage academic entrepreneurship); and c) sources of technology (i.e. they can stimulate innovative activity of the firms). Camagni [1991], in the innovative theory, argues that proximity to university means proximity to sources of highly skilled labor which are highly mobile within a cluster. According to Camagni [1991, Keeble [2000] and Smith, and de Bernardy [2000] this proximity, together with university-firm relationships, accounts for much of collective learning inside the cluster. According to Keeble [2000], the role of the knowledge institutions, namely universities, in promoting collective learning in the cluster encompasses:

- creating preconditions for regional collective learning in terms of informal networks of former students and researchers, and SME research cultures of collaborative innovation generating local technology-based spin-offs as a source of new innovative firms and regional technology competences;
- training scientists, engineers, researchers and other graduates where recruitment of this highly-qualified labor by cluster firms is seen as one of the most crucial ways in which local universities can shape and foster the growth of a technological center;
- collaborating with technical center in R&D.

Further, Keeble [2000] emphasizes that process of knowledge diffusion and development which leads to dynamic process of regional collective learning is fostered by the movement of key individuals and skilled workers carrying technological and man-

agerial know-how and 'embodied expertise' between firms and other organizations (e.g. universities, research institutes, etc). New spin-offs are seen as important type of this movement not just for the knowledge transfer and development but for the generation and sustainability of inter-firm and firm-university linkages.

According to Keeble [2000], founders of these spin-offs often maintain close relationships with their 'parent' organization, creating, thus, opportunities for networking, collaboration and the development of further 'untraded interdependences'. The successful examples studied by Keeble and Wilkinson [2000] show the high percentage of spin-offs. One of them is Cambridge cluster where 88 percent of high-tech SMEs is spin-offs or new start-ups founded by entrepreneurs formerly working for a local firm (56 percent) or university (19 percent).

Table 1. Below lists the types of knowledge interactions that are believed to be especially relevant for the university-firms interactions. For the purpose of this study, 'employment of graduates by firms', 'new firm formation by university members', 'training of firms members', 'collaborative research, joint research programmers', 'contract research and consulting', 'use of university facilities by firms', and 'licensing of university patents by firms' are considered as the main factors that determine relationship between university and firms, whereas the other factors will be used for the policy and future work recommendations.

Table 1. Types of knowledge interaction between university and firms

Types of knowledge interaction	Formalization of interaction	Transfer of tacit knowledge	Personal (face-to-face) contact
Employment of graduates by firms	+/-	+	-
Conferences or other events with firm and university participation	-	+/-	+
New firm formation by university members	+	+	+/-
Joint publications	-	+	+
Informal meetings, talks, communications	-	+	+
Joint supervision of PhDs and Master thesis	+/-	+/-	+/-
Training of firm members	+/-	+/-	+
Mobility of researchers between university and firms	+	+	+
Sabbatical periods for university members	+	+	+
Collaborative research, joint research programmes	+	+	+
Lectures at university held by firm members	+	+/-	+
Contract research and consulting	+	+/-	+
Use of university facilities by firms	+	-	-
Licensing of university patents by firms	+	-	-
Purchase of prototypes developed at university	+	-	-
Reading of publications, patents, etc.	-	-	-
+ (interaction that typically involves formal agreements, transfer of tacit knowledge, personal contacts)	- (interaction that typically does not involve formal agreements, transfer of tacit knowledge, personal contacts)		
+/- (interaction with varying degree of formal agreements, transfer of tacit knowledge, personal contacts)			

Source: M.M.Fischer et al. (2006:138)

3. Purpose, The Data and Research Methodology

The purpose of the field study is to explore whether there are intensive linkages and networks between the Education Institution and Productive Sector. More specifically, we examined if the firms make common innovative projects with the University and employ a high level of highly-qualified personnel. The primary objective of the study is to put forward adequate policy recommendations directed towards the promotion and intensification of inter-firm and firm- university networks in order to obtain maximum benefits of the clustering concept.

Inside the boundaries of our research, data was collected at one level: firm level. Apart from the general background and contextual information, the questionnaire were designed in order to identify the existence and frequency of inter-firm networks; university-firm linkages and structure of employees; as well as types of cooperation, motives for cooperation or reasons for non-cooperation. Analytical software SPSS is used for statistical analysis of collected data. Statistical and descriptive analysis of the information collected throughout the questionnaires and interviews provide the basic and general indicators about the mobility of labor, inter-firm and firm-university relationships.

4. Findings

4.1. General Information and Characteristics of the Surveyed Firms

At the time of the survey a total number of 100 industrial firms have been surveyed. The survey firms belong to Mures Region and were chosen randomly.

From the whole number of surveyed firms, 94 percent can be considered as of micro and small size regarding the number of employees. Only 6 percent of the surveyed tenant firms reported to have more than 50 employees.

4.2. Testing the Hypotheses

After analyzing the basic information about the tenant firms' we can continue with testing the hypotheses of this study.

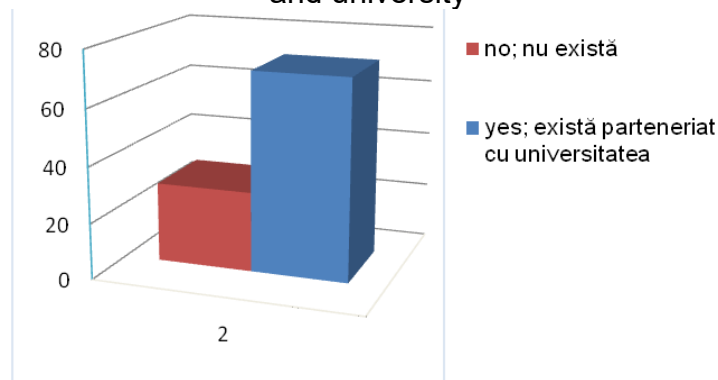
Hypothesis 1

Is there connection between innovative technology companies and the University "Petru Maior"

To test this first hypothesis will be applied chi-square test to see if there are any association between innovative companies and university. Is a technique used for discrete data, and in some cases for continuous data, such as comparing two different entities to see if there are connections between them?

The results of this hypothesis are, as illustrated in the table below. Only 28,6 percent of respondents said that there are collaboration between Technology Company and the university, and 71,4 percent don't have a collaboration, but considers it is desirable future collaboration.

Tabel 2. The existence of partnerships between innovative technology companies and university



Hypothesis 2

If small technology-intensive firms are collaborating with the universities for R&D projects then due to the proximity to university these firms will employ a high level of highly-qualified personnel.

Our results (question 6 – 7) indicate that small technology-intensive firms have more problems in finding highly qualified employees in comparison with the middle size (between 11 and 50 employees) and large size (above 50 employees) tenant companies. These results also depict the necessity for small technology-intensive firms to develop strong inter-firm and firm-university relationships in order to overcome a variety of difficulties such as, the problem of finding the highly qualified workforce.

Hypothesis 3

If the technology-intensive firms have high level of firm-university alignment then there will be a increase of productivities and profitability for the firms.

From our analyses and results(question 1,2,3,12) it can be concluded that the vast majority of both small technology-intensive firms and big companies settled in studied comprehend proximity to university as a beneficial factor that aids them in accessing the professional employees. Employing graduates from the near-by university by tenant firms is one type of interaction between the university and companies. According to our logical framework this kind of interaction has a positive influence in the sense of formal agreements and transfer of scientific, as well as tacit knowledge.

This is the first step for increase of the productivity and profitability for the studied firms.

Moreover, management companies of the studied firms can be seen as mediators that enhances interactions between the university and tenant firms.

4.3. Additional Findings and Remarks

Even though tenant firms perceive proximity to university as highly beneficial in order to access professional employees, they still have problems in finding highly-qualified personnel. Especially this is the case with small technology-intensive tenant firms.

We assume that small tenant firms do not want to invest in the highly-qualified labor or do not want to offer attractive wages, due to the fear of losing employee and, thus, losing their investments.

Table 3. Results of the question 6: Consider that is a opportunity to have highly-qualified labor for R&D activities?



In addition, it is important to mention that one of the key features of success of techno-parks, discussed previously, is the availability of the capital ready to take risk of investing in innovation (Castells and Hall, 1994:237), R&D and new technologies. In order to conduct R&D and to be innovative new and small technology-innovative enterprises must find ways of generating funds to keep them alive (Castells and Hall, 1994:232). This capital can further enable technology-intensive firms to prosper and sustain their competitive advantage.

According to our analysis majority of the firms has EU or structural- funded projects, or both. Moreover, there are other institutions that provide R&D funds for companies which indicate that there is opportunity to access more easily domestic and foreign capital needed to pursue R&D and innovation. Thus, we assume that these funds can aid small technology-intensive firms by providing finance for their development. Our results indicate that larger firms have some advantages over small firms that may be manifested in easier access to external resources and particularly funds, exploitation of economies of scale and scope, etc. We find that the use of external finance is associated with greater innovation. Our evidence suggests that market pressures through competition are important factors influencing positively innovation of firms. We also find that manufacturing firms are more innovative, possibly because they need more improvement in their technologies or new technologies to remain viably competitive as they are more prone to be influenced by exogenous technological change.

5. Policy Recommendations

The following policy needs have been identified:

- Need to increase level of highly qualified labor;
- Need to enhance firm-university cooperation;
- Need to encourage development of inter-firm networks inside the techno-park;
- Need to encourage and enhance development of inter-firm networks among the near-by techno-parks' tenant companies.

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**Some Consideration about Knowledge
Management Ontology.
Building Ontology with
Protégé 4.02**

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Abstract

Purpose – The main objective of this paper is to survey some of the basic concepts that have been used about knowledge management and ontologies.

Methodology/approach – We used case-study method based on application of Protégé-OWL 4.02. editor, due to the possibility to build ontologies for the Semantic Web.

Findings – The most important results is the following: there is no single correct ontology for any domain. Ontology design is a creative process and no two ontologies designed by different people would be the same.

Research limitations/implications – The case-study presents the advantages of valuable details of implementing concepts but such studies cannot be generalized for the knowledge management ontology.

Practical implications – The results of the paper present important frameworks in ontology design understanding and applications.

Originality/value – The paper uses Protege 4.02 for creating tourism OWL ontology.

Key words: ontology, knowledge, knowledge management

Introduction

Technology holds a pivotal position both as a domain for knowledge possession and creation and as a possible contributor to the knowledge proliferation and management processes. Hence, although the primacy of the human resource, as the originator and developer of knowledge, is firmly established in the KM canon, it is also necessary to contemplate the role and interaction of technology. This provides the potential facilitator and enabler of capabilities within the knowledge building cycle, identified by Nonaka (Nonaka, Takeuchi, 1995) and others as being the core business process occurring within contemporary 'knowledge companies' (Fowler, 2000).

Ontology comprises the explicitly articulated and shared concepts of a knowledge community or domain. These concepts are arranged formally in taxonomy and are governed by specifically defined rules and axioms. Ontologies often play an important role in knowledge management information technology (KMIT). For example, an enterprise knowledge management IT system may use ontology to facilitate communication, search, storage and knowledge representation (O' Leary, 1998). A general survey of the literature suggests that ontologies are capable of improving performance in a large variety of knowledge management IT functions, especially relative to knowledge bases for best practices, lessons learned human resource skills.

Theory Fundamentals

Ontology has its origins in philosophy and to this day informs a vital approach to philosophical inquiry. Philosophical ontology deals with, metaphysical aspects of the nature of existence, touching upon the various meanings, relationships, and instances of the abstract, the concrete, the general, and the specific.

Within the last 40 years, ontology has become a central component in computerized information processing, especially in constructing large databases. Ontologies has also figured predominantly in software application development: artificial intelligence initiatives, Web services, e-business, information and document retrieval e-commerce, de-

cision-support, medical informatics, the semantic Web technologies and, of course, in various IT applications of knowledge management. Within all these domains, the highly theoretical (philosophical) view of term ontology undergirds the very pragmatic outcomes sought in computerized knowledge systems. Ontologies are formal and informal. The ontologies attempt to cohere conceptually the rational building blocks of the mind by modeling our knowledge of reality. The whole purpose of this is to give the computer humanlike, albeit modest, thinking ability, by providing an explicit vocabulary for things, ideas, actions, relations and approved behaviors. Ontologies with the expressive power that provides these capabilities are generally termed formal ontologies.

The formal ontologies seeking rigor must be composed of concepts whose instances exist exclusively in their class location in the hierarchy.

In 2000 Sowa (Sowa, 2000) delineated formal ontologies in two subgroups: axiomatized and prototyped based. The axiomatized ontologies is characterized by its logical definitions and axiomatized (assumed truths) that ultimately have great power because they can support more complex inferences and computations.

According to Sowa 2000 the informal ontologies, to a greater or lesser degree, have some of the characteristics of formal ontologies, particularly selected groups of terms or labels relevant to some topic or area of interest (a document collection, Web site, product catalog, or business area). When the components of the informal ontology are arranged hierarchically, they are often termed taxonomies, directories, subject heading lists, or thesauri.

When including definitions, they may be called lexicons or glossaries. And if they are simply computer files containing sets of controlled terms, they may be called controlled vocabularies or synonym rings.

Informal ontologies, because of their weak semantics (term meanings) are incapable of rich expression (McGuinness, 2002). The informal ontology itself does not have the power of a formal ontology. The informal ontologies are not driven overtly by logical constraints, are not formalized in a knowledge representation language, are not axiomatized. In short, they do not have the expressive power that may need to be harnessed for sophisticated purposes in academia, business medicine, law or government.

Knowledge management ontology defines knowledge management as an entity (such as an individual, group, organization, community nations) deliberate and organized efforts to expand, cultivate and apply available knowledge in ways that add value to the entity, in the sense of positive results is accomplishing its objectives or fulfilling its purpose (Holsapple, Joshi, 2004).

This ontology adopts an episodic view to knowledge work. In other words, an entity knowledge management work is viewed as a collection of episodes. These episodes, which vary in structure, function, and purpose, unfold in various settings to accomplish a range of different tasks. This ontology characterizes a knowledge management episode, as a configuration of knowledge manipulation activities, by a collection of knowledge processors, operating on available knowledge resources, subject to knowledge management influences and, yielding learning and / or projections (Holsapple, Joshi, 2004). Knowledge management episodes are triggered to satisfy a knowledge need or opportunity is satisfied or terminated. Some examples of

knowledge management episode include decision-making problem-solving and brainstorming episodes.

The ontology in its current form provides a foundation for systematic knowledge management research, study and practice. IT provides researchers with a unified and comprehensive view of KM that is crucial for studying KM. It gives practitioners a frame of reference for evaluating KM practices and identifying KM opportunities. It forwards a structure and content for developing a formal KM curriculum.

Methodology and Case Study

The reasons to develop an ontology are described by Noy and McGuinness:

- Sharing common understanding of the structure of information among people or software agents is one of the more common goals in developing ontologies (Musen, 1992; Gruber, 1993). For example, suppose several different Web sites contain medical information or provide medical e-commerce services. If these Web sites share and publish the same underlying ontology of the terms they all use, then computer agents can extract and aggregate information from these different sites. The agents can use this aggregated information to answer user queries or as input data to other applications.

- Enabling reuse of domain knowledge was one of the driving forces behind recent surge in ontology research. For example, models for many different domains need to represent the notion of time. This representation includes the notions of time intervals, points in time, relative measures of time, and so on. If one group of researchers develops such ontology in detail, others can simply reuse it for their domains. Additionally, if we need to build a large ontology, we can integrate several existing ontologies describing portions of the large domain. We can also reuse a general ontology, such as the UNSPSC ontology, and extend it to describe our domain of interest.

- Making explicit domain assumptions underlying an implementation makes it possible to change these assumptions easily if our knowledge about the domain changes. A hard-coding assumption about the world in programming-language code makes these assumptions not only hard to find and understand but also hard to change, in particular for someone without programming expertise. In addition, explicit specifications of domain knowledge are useful for new users who must learn what terms in the domain mean.

- Separating the domain knowledge from the operational knowledge is another common use of ontologies. We can describe a task of configuring a product from its components according to a required specification and implement a program that does this configuration independent of the products and components themselves (McGuinness and Wright 1998). We can then develop ontology of PC-components and characteristics and apply the algorithm to configure made-to-order PCs. We can also use the same algorithm to configure elevators if we “feed” elevator component ontology to it (Rothenfluh, et al., 1996).

- Analyzing domain knowledge is possible once a declarative specification of the terms is available. Formal analysis of terms is extremely valuable when both attempting to reuse existing ontologies and extending them (McGuinness, et al., 2000). Often ontology of the domain is not a goal in itself. Developing ontology is akin to defining a set of data and their structure for other programs to use. Problem-solving

methods, domain-independent applications, and software agents use ontologies and knowledge bases built from ontologies as data.

We build on a tourism ontology using Protégé-OWL 4.02. Protégé is a free, open-source platform that provides a growing user community with a suite of tools to construct domain models and knowledge-based applications with ontologies.

The Protégé-OWL editor enables users to build ontologies for the Semantic Web, in particular in the W3C's Web Ontology Language (OWL).

In practical terms, developing ontology includes:

- defining classes in the ontology,
- arranging the classes in a taxonomic (subclass–superclass) hierarchy,
- defining slots and describing allowed values for these slots,
- filling in the values for slots for instances.

The OWL ontology includes descriptions of classes, properties and their instances. Individuals, represent objects in the domain in which we are interested. 'Individual' is another name for 'Instance' in ontology terminology. Properties are binary relations on individuals - i.e. properties link two individuals together. OWL classes are interpreted as sets that contain individuals. They are described using formal (mathematical) descriptions that state precisely the requirements for membership of the class. The word concept is sometimes used in place of class. Classes are a concrete representation of concepts. In OWL classes are built up of descriptions that specify the conditions that must be satisfied by an individual for it to be a member of the class (Figure 1).

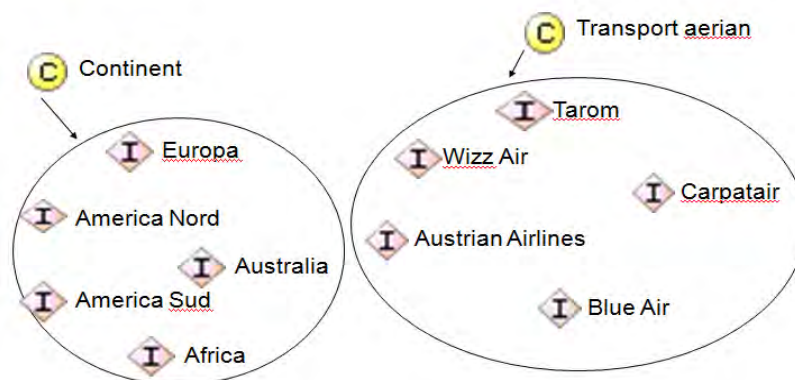


Fig.1.

In Protege 4.02, editing on classes is done with Classes' tab. The empty ontology contains one class called Thing. As mentioned previously, OWL classes are interpreted as sets of individuals (or sets of objects). The class Thing is the class that represents the set containing all individuals. Because of this all classes are subclasses of Thing. For exemple the class Transport aerian, with the instances Austrian Airlines, Blue Air, Carpatair, Tarom și Wizz Air, is subclass of the class Transport, which is subclass of the class Companii intermediare, which is subclass of the class Thing (Figure 2).



Fig. 2.

OWL allows classes, properties, individuals and the ontology itself (technically speaking the ontology header) to be annotated with various pieces of information/metadata (Figure 3). These pieces of information may take the form of auditing or editorial information. For example, comments, creation date, author, or, references to resources such as web pages etc.

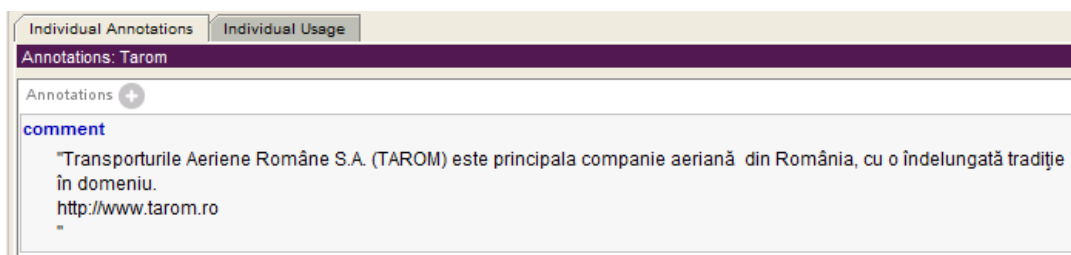


Fig. 3.

Our ontology contains the following classes: Turism, Destinații și cazare, Documente, Persoana, Companii intermediare și Atracții. We added for which class other subclasses, and other subclasses, and other subclasses and so long. Finally we got the classes hierarchy (Figure 4). The classes hierarchy is viewed with the tab OWL Viz (Figure 5).

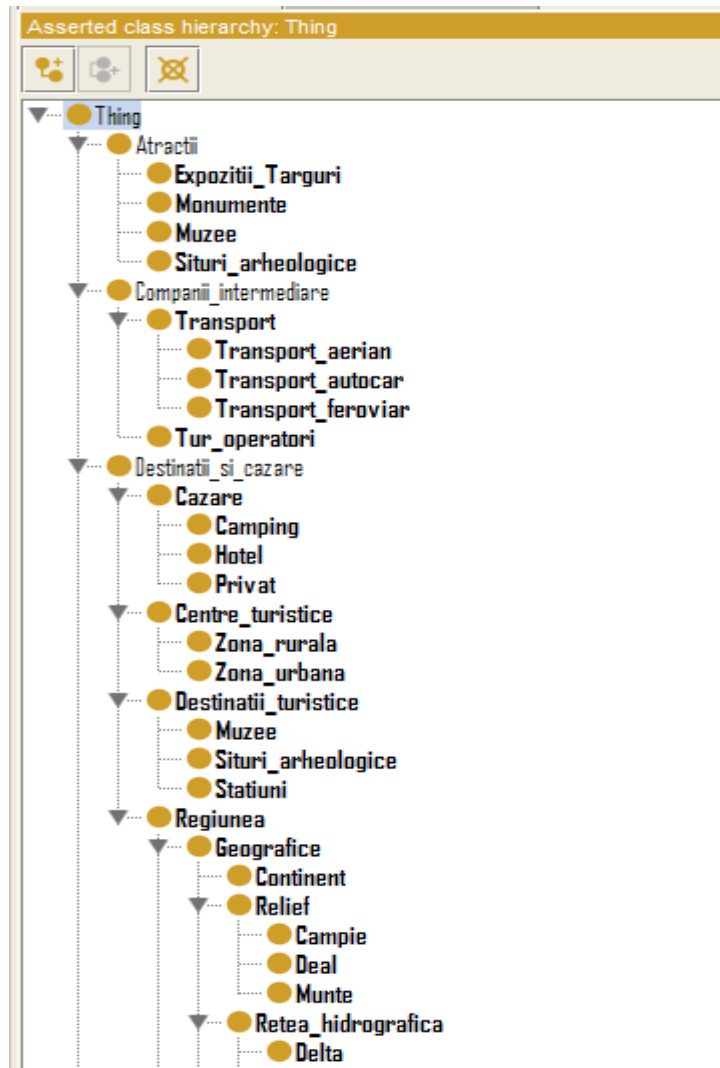


Fig. 4.

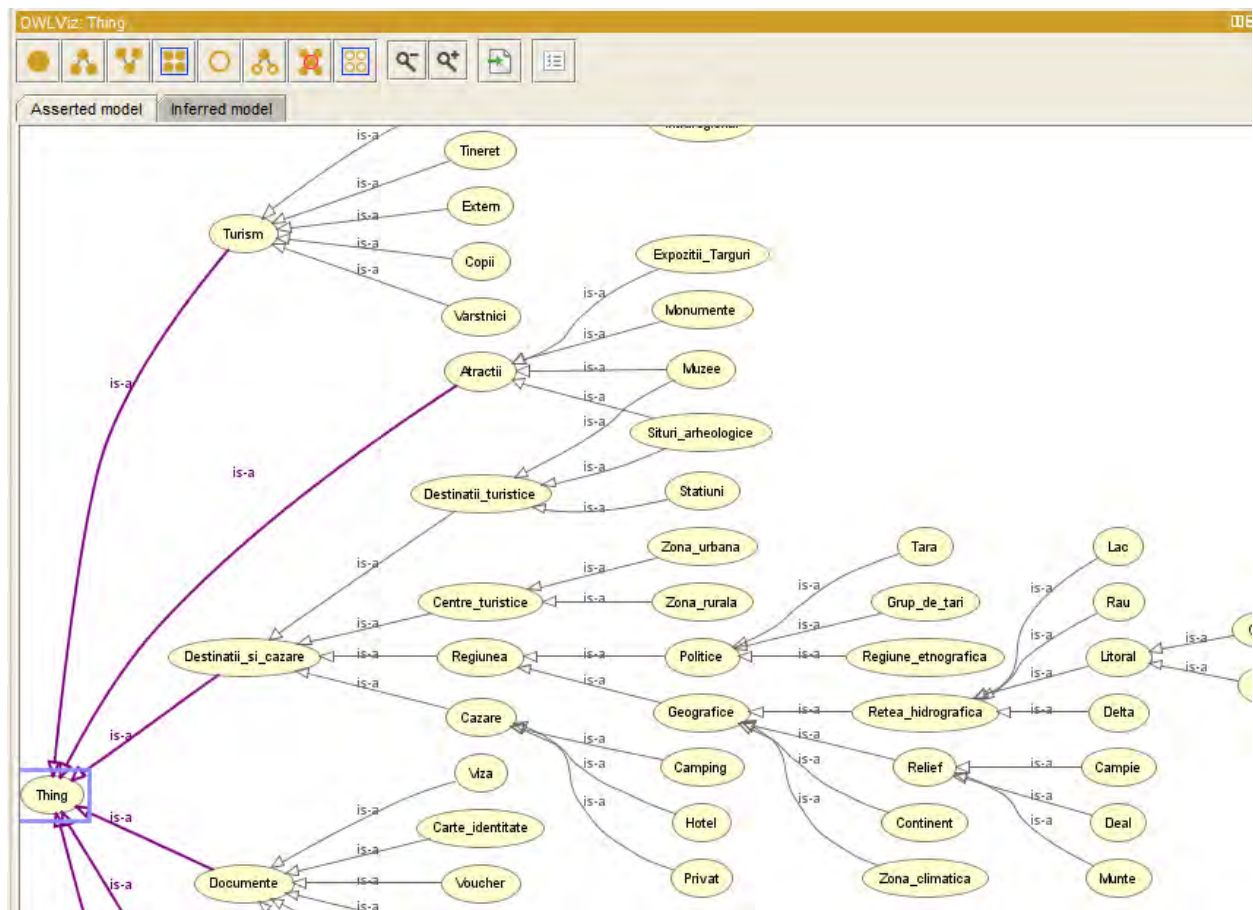


Fig.5.

Discussion and conclusions

The huge advantage of ontology is not in processing, but in sharing meaning, emergence and discovery of gaps and for improving a tacit knowledge transfer. Ontology may contain information in a specified declarative language, but it may also include unstructured or unformalized information expressed in a natural language or a procedural code.

The ontology is central to KM strategies in any field for capturing and utilizing knowledge assets. The loss of critical knowledge assets with employee turnover and retirement must be stemmed through capturing and leveraging knowledge. This is only possible through the use of dynamic classification.

In recent years, ontologies have been adopted in many business and scientific communities as a way to share, reuse and process domain knowledge. Ontologies are now central to many applications such as scientific knowledge portals, information management and integration systems, electronic commerce, and semantic web services.

In this paper we addressed the complex issues of defining class hierarchies and properties of classes and instances. However, after following all the rules and suggestions, one of the most important things to remember is the following: *there is no*

single correct ontology for any domain. Ontology design is a creative process and no two ontologies designed by different people would be the same. The potential applications of the ontology and the designer's understanding and view of the domain will undoubtedly affect ontology design choices (the users can add different specific instances).

When we want to define complex ontologies, Protege is a better choice than OWL, because its highly developed visual interface allows the definition of classes, instances, properties and relations only with a few clicks thus saving time.

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“Shared Vision” – Theory and Practice

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Abstract

Purpose – The purpose of this paper is to present a discussion on the vision of an organization, in theory and practice. Supporting data from a Romanian company have been therefore collected.

Methodology/approach – Longitudinal case study, observations, interviews, questionnaires.

Findings – Our research suggests that an emergent vision concerning the future of the organization may exist in every organization, emergent vision that could be a valuable source of cohesion and strategic advantage or, conversely, a potential trouble source for organizations. Based on this hypothesis, we propose a model regarding the interaction and its consequences between the formal vision of the firm and the hypothetical emergent vision.

Research limitations/implications – Our hypothesis is based on the results of a case study. In order to verify and validate our hypothesis as well as the related model, further research is necessary.

Practical implications – In the management of daily interactions in formal and informal handling of groups and organizations, in strategy formulation and implementation

Originality/value – Except for the theoretical background all the research and related material are the result of the authors' work. The proposed hypothesis and model are original.

Key words: organizations, shared-vision, strategy

The Concept of Shared Vision

A person's ability to think for the future and plan by using intelligence and imagination is known as *vision*. By tradition, vision is a very rare quality bestowed only upon the chosen ones, similar to the inheritance of Shamanism, of an oracle or of a providential man. The fact that in the case of vision we are dealing with an exceptional, uncommon, even mystical quality of an individual results from definitions in dictionaries and managerial literature. That quality is explained either as an explicit ability – an “*unusual competence*” – or as some tacit capability, such as intelligence, imagination, intuition, considered to be rare and a precondition to vision capability.

But, at the same time, through vision we also understand “somebody's ideas or hopes regarding the way something is to be done, or about something that's going to happen in the future”, “the way, somebody perceives or conceives something”. Thus, vision endowed with “great evocative and stimulative power” (March, 2005) is or is likely to be an experience specific to each individual irrespective of his/her abilities or status.

As a conclusion, vision, as a concept, can be perceived in two ways. One is related to the exceptional, the other to the common way of life.

An important aspect needed for the introduction of the concept of organizational vision is the notion of “sharing”. In Romanian, *sharing* has multiple meanings, differing in the depth of the phenomenon, concept and feeling of sharing: “Communicating, revealing one's thoughts to somebody”; “Accepting and agreeing with someone's point of view”; “Sharing something with somebody, having something in common”.

These levels reflect mainly three different degrees of evaluation, appreciation and relating to others. On these grounds, partners have the opportunity to find out each other's extent of implication and orientation, and to identify the actions that can channel efforts towards a common purpose. It is, therefore, important to think about vision in terms of something that is shared in an organization.

The Shared Vision of an organization

As the organization usually represents an aggregate of inter-human relationship one can raise the following question: is it possible to talk about the vision of an organization? If so, how does it surface and how does it resonate in the consciousness of every individual of the organization?

Irrespective of the role performed in an organization, a person may hold or not a proper opinion – a vision – over the organization's existence over a time horizon, usually defined. In literature, by reification, an organization gains the quality of being capable to develop a vision of its own future. The evolution of the organization can be regarded as either progressing towards its own vision or just as reacting to stimuli or coercions coming from the environment.

Therefore, each entity inside an organization, either a business unit, department or individual, lives in a permanent dialogue and informational exchange with its environment. This means, among other things, that every entity checks out through introspection, in comparison with the larger entity to which it belongs, both its own values (De Geus, 2000) and the way it perceives the firm's purpose and future, and the entity's role in achieving that future.

This only becomes possible on the condition that at the organizational level there is a set of fundamental shared values, which can represent the referential basis from which setting up of a common view over the future of the organization is likely to occur.

Creation of a common view regarding the future of the organization, called by Senge (1990) "shared vision", which is based upon the shared values and personal aspirations of the people inside the organization, is one of the most important and difficult tasks the leaders of an organization must fulfill (Kouzes and Posner, 2009). This is important because the long term success of the enterprise depends on the generative learning which only takes place when people try to achieve something that really matters to them (Senge, 2006), in their endeavor to achieve a purpose worthy of their dedication (Hamel and Prahalad, 2005).

Identifying the role of each member of the staff from the perspective of the past (the reward for everyone's activity), of the present (formal and mainly informal connections and relationships) and from the perspective of the future employee-organization inter-relationship represents a bond. That bond is an outcome of the fact that the person involved finds out in due time his/her future role in the organization, which enables him/her to adapt his/her competences and identify the self motivating resources that support the attainment of the future image of the organization.

Consequently, shared vision tries to give an answer to one of the fundamental questions of management: How can a long-term commitment inside the organization be generated? In this view, Senge(2006) asserts that a vision of the desired future lies at the heart of any long-term perspective in organizations. However, simultaneously one must have in view that vision "will generally only be a motor of change if it can be shared by at least a few people" (March, 2005).

The link between Strategy and Vision

Strategy can be described as a thinking process whose outcome is a series of “decisions which determines behavior over some stretch of time” (Simon, 1946). This process can be thought about as one of creating, planning, analyzing, recognizing, negotiating, reacting to environmental change, or as a result of learning (Mintzberg et. al.1999). From the point of view of an organization, there is a first fundamental question to be answered: who is the creator, who is the one who conceives the strategy of an organization?

Out of the ten different thinking approaches outlined by Mintzberg(1999), nine see the process of creating an organization’s strategy rather as a collective performance, the different view being the entrepreneurial way in which strategy appears as a chain of events that implement the vision of the leader or entrepreneur.

The learning organization brings a distinctive note. Strategy is regarded as a set of decisions pursuing the firm’s vision, which is founded, in this case, on the individual vision of the employees aggregated at the organizational level.

When along with the fundamental purpose of the organization and the fundamental values the image of the desired future is considered, the set of ideas are in place to make the strategic approach to building a learning organization feasible. The learning organization is defined by Senge as “an organization that is continually expanding its capacity to create its future” (Senge, 2006).

In the authors’ opinion the conscious pursuing of the vision by the organization means to create a strategic and organizational alignment in order to preserve the fundamental traits of the organization. That alignment together with the stimulation of progressing towards the envisioned future makes an essential contribution to the organizational survival and possibly its sustainability.

Case Study

The case presents a company that was founded over 15 years ago as a private investment with one hundred percent-Romanian capital. From the very beginning, we found a series of characteristics indicating the existence of a vision, at least at two of the organization’s levels: the founders and the management.

The firm declares itself as “the first private joint stock company with entirely Romanian capital which operates in the pesticides industry”; all production facilities and the logistics have been built from the ground. The 1993 shareholders’ decision to found a private company able to compete and possibly to gain an important share of the pesticide market, at a time when that market was being dominated by the huge and inefficient state owned chemical enterprises, proved to be extremely inspired. The choice of industry, products, technology, partners, distribution channels, ways of hiring employees have passed the test of effectiveness and proved to be profitable ever since the beginning of the company.

The majority of managers and employees originated from the same company, and brought with them part of the culture of that organization: a series of practices, ways of thinking and approaching problems, work procedures and methods, as well as customs, rituals, sympathies and animosities that have accumulated over time. Each member of the staff knew almost instantaneously where to intervene, what to ask from whom, what to expect from the others and what the others expected from him/her. Practically, the inter-human "lubricant" offered by the common experience in the same field of activity and - exceptionally in this case - in the same place and time, did help diminish the effects of the difficulties generated by the inherent continuous negotiation of positions and roles in the organization. This frees resources to be channeled towards achieving the objectives set by the management. The direction implicit in the organization's objectives was summarized by the top management in a brief statement: "We sell health for the plants by producing and selling pesticides".

Unlike in the first years of the firm, later on one can notice a series of informal and formal changes, whose consequences can be perceived both in the prevailing climate and in the economic performance. Today the company stays profitable, but its potential is only partially valued.

A quick recounting of events shows that, due to the shortage of human resources caused by the rapid growth of the company, some major changes have happened. The founders' role has decreased little by little, as some influential figures resigned from executive positions. This has negatively affected the balance in the structure of shareholders; the company has been merged into a Romanian group of companies. In the last years, the entire decision making process and a great deal of the supporting processes have been taken over by the acquirers.

Most often, changes have been done unexpectedly, without communicating properly with the employees, who ended up not knowing what was going to happen and to what extent the evolution of events was to change their activities and lives. These aspects shattered solidarity and employees' trust in their leaders' decisions and, little by little, cohesion amongst them vanished. All these were aggravated by the retirement of the older members of the staff and by the attrition of personnel.

Our studies indicate that the strategic vision of the shareholders is not openly communicated to all employees. We have enough reasons to believe that not even the executives are well informed about the major decisions. This comes contrary to the need that all members of the organization know the vision and the ways to achieve objectives when the organization comes under pressure from diminishing markets and from new European environmental legislation.

The annual sale cycle in the industry is almost exclusively determined by the volume and quality of the agricultural production and the firm's activities have a strong seasonal character. Until 2-3 years ago, the company used to smooth the workload by producing pesticides during the agricultural extra-season and doing maintenance during the summer-fall interval. That sensitive balance broke and, in the last two years, the company took advantage of the unemployment legislation by laying people off temporarily during the unproductive period of the year.

We found that either no measures were taken to eliminate this cycles, or the measures did not call on employees to participate in the decision making and implementation. The general perception of the employees – manifested openly or through changes of attitude, which are obvious from their becoming reluctant, reserved and uninterested – is that nothing is done or, even worse, if something is done it is against the interest of the majority. As a result, we noticed that many of the employees are permanently looking for an alternative place of work, and those who stay do so as a transient alternative.

Results of the Survey

In order to see to what extent employees are able to identify the existence of the vision in an organization, and to find out the way they are related to it, we have administered a questionnaire. It was meant to identify aspects of the following type: employees are aware that their company has a vision; employees understand that vision; they need this vision as a moral support, as a guidance in their actions and in the way they connect themselves to daily activities; employees feel themselves involved in creating that vision, etc.

A number of 58 percent of the employees of the company have answered the questionnaire. The reported results hereunder refer to the group that answered the questionnaire.

More than half of those questioned (64,29 percent) answered that they accept that the firm could have a, with a significance similar to an individual's vision for the future. Of those, 71,43 percent¹ believe that the shareholders are the ones who must know the vision of the company; 21,43 percent believe that only the managers should know it and only 28,57 percent believe that the vision should be known by the whole personnel.

Regarding the factors that should contribute to the creation of the company vision, 64,29 percent² assert that this is only the managers' responsibility, 57,14 percent point to shareholders and 28,57 think all employees should take part. We have to mention that this last group of 28,57 percent includes different people than the group that answered that all in the company should know about its vision. As to the question: "Who proposed the vision?" 78,57 percent mentioned the shareholders and 21,43 percent the managers. We may therefore conclude that there is unanimity that the company's vision should be the creation of a special group.

It results that those interviewed about the vision of the company believe that it is very natural for a company to have a vision, known to shareholders and managers and created by that select group of individuals. Although the vision regards the company for which they work, that vision is of no concern to them. Yet, a prevailing feeling is that of exclusion from building the future of the company. This aspect is complemented by the reported fact that even operational information does not reach those who should have it.

The next question - with answers ranging from 1 to 4 on a Likert scale – investigated whether the employee knows, or does not know the vision of the firm in which he/she works. 64,29 percent answered more or less decided that they did not know the

vision of the firm, and only 35,71 gave a positive answer, but even in this group only 14,29 percent were convinced they knew what the vision of the firm was. Surprisingly, in spite of this, 57,14 percent of those questioned acknowledged that there were common aspects between the vision of the firm and their own vision regarding the future of the firm.

A majority, 71,43 percent, of the employees feel themselves excluded from the process of creating the vision of the company. This is the result of their negating the statement: "I have also contributed to the development of the firm's vision". The same proportion of those questioned denies that they are given the chance to express their opinions concerning the future and the direction the organization should follow.

Probably as a logical consequence, 57,14 percent of the employees do not feel that the vision offers moral support in their activity. Yet, the fact that 42,86 percent of the interviewees admit that vision gives them moral support indicates that either the idea of company vision is not sufficiently understood, or the answers are inconsistent. It is also possible that in the minds of those who stated they do not know the vision of the firm, there is a substitute (illusion/chimera/imagination) of that. Maybe the most surprising result of all is the reply of 85,71 percent of those questioned who believe they do understand the way their activity contributes to the progress of the company in the direction outlined by the vision. This result is surprising in the conditions in which 64,29 percent state they do not know what the vision of the firm is.

Without excluding either an error in the questionnaire, inconsistencies in filling it or misunderstanding the concepts, the result may still be valid. In this case, the following hypothesis may be true: in the absence of an official vision (at least a communicated one), each employed develops his/her own image of the future of the firm, based upon the shared values and principles of the organization. These individual visions result in an emergent vision (statically constituted) which is very close to the official vision of the firm or, at least, to the intention of the dominant group of shareholders. That intention appears from official statements and from the general presentation of the company. The emergent vision is not articulated and (possibly) employees are not aware of it.

Although this hypothesis is the outcome of an individual case study, it is possible that it has a more general applicability. According to the theoretical considerations of Senge (1998) in a company there may exist multiple visions. Those multiple visions – individual and group visions – make up a vision that we may call the emergent vision of the company, which always exists, whether articulated or not, communicated or not, people being aware of it or not. This may differ from the official vision of the company, which is supposed to lie at heart of all strategic decisions, should be articulated and/or communicated and of which the leaders of the company should be aware.

In this context, we believe it is possible that between the vision of the company, expressed formally, and the emergent vision, there are four types of interactions with the results mentioned in fig. 1

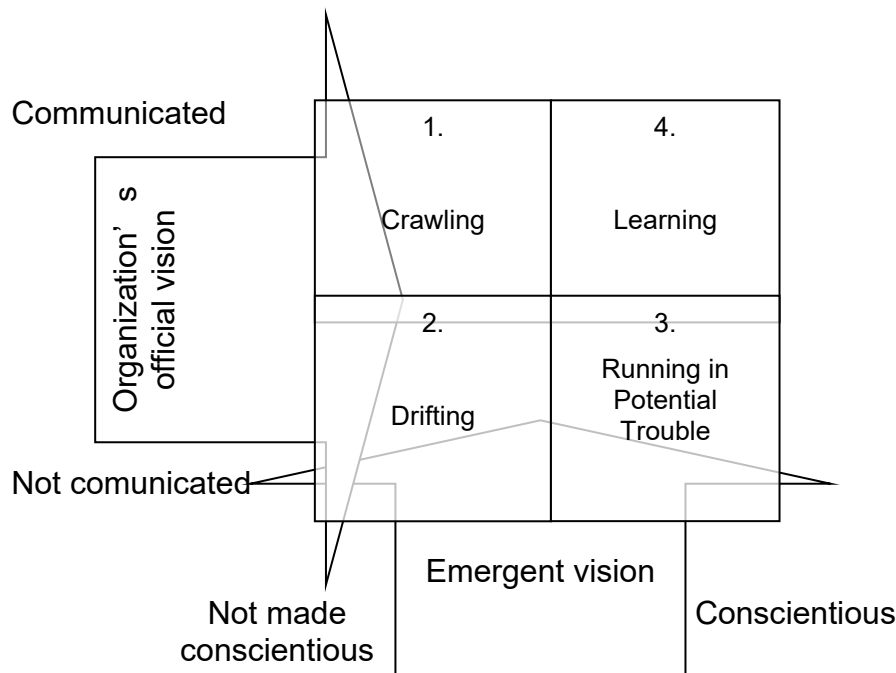


Fig. 1. Emergent and official vision of the company: possible types of interaction

1. *Crawling*. The official vision is communicated; the emergent vision is neither articulated, nor made conscientious by employees; strategic direction is imposed and possibly accepted by employees; employees rather compliant than committed.

2. *Drifting*. The official vision is not communicated, the emergent vision is neither articulated, nor made conscientious by the employees; strategic direction likely inexistent, employees' main attitude: „managing the position”.

3. *Potential trouble*. The official vision is not communicated; the emergent vision is made conscientious and can be eventually articulated by an informal leader; employees' attitudes eventually range from discontentment to outspoken opposition if their perception regarding the organization's strategic direction is seemingly opposite to the emergent vision

4. *Learning*. The official vision is communicated, the emergent vision is made conscientious and collected by company leadership; strategic direction assumed by the firm's members; employees rather committed than compliant

Conclusions

The intention of the present study is to find out to what extent the two perspectives of strategy development that start from the future image of the organization – the entrepreneurial view and the learning organization paradigm – are represented in the practice of the Romanian companies.

We found that organizations that are highly dependent on the visionary/charismatic entrepreneur for shaping the values and practices run the risk of drifting in his/her absence. If the entrepreneur-founder disappears, inter-human relations are seriously perturbed and the organization's capacity of mobilizing resources and surviving in the long-term becomes questionable, even if in the short-term it can perform the function it was created for.

Our study confirms the thinking of Collins and Porras. Rather than concentrating managerial effort strictly towards achieving an organization's defined function, it is better to channel those efforts into creating an organization that develops its desired function along with a permanent capability of identifying the means and ways needed for the achievement of the function. That is, an organization able to learn. Such an approach most likely requires a much greater effort, but it likely to create a more prosperous organization in the long run (Collins and Porras, 2004).

We found that the vision as an uncommon, exceptional quality applies better to an entrepreneur's organization, while the common way of life vision is applicable to learning organizations. Sharing is essential because the extent to which an organization manages to align itself with a vision-centered strategy depends fundamentally on the degree the vision is shared by employees. The higher the degree of sharing, the greater the chance the employees will be more effectively committed in the direction delineated by the vision of the firm.

When sharing is absent, we found that it is possible for employees to develop a new vision (common, in a statistic way) of the future of the company. This will be an emergent vision. According to the emergent vision, employees could exhibit behaviors that do not necessarily lead in the direction intended by founders or shareholders and can hinder the company's evolution. At the same time, if managers capture this vision an opportunity arises to develop a better vision for the organization. Such a vision can found new creative strategies and harness the energies of the organization's members on the road to long-term success.

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Notes

¹ Multiple answers permitted a percentage over one hundred.

² Multiple answers permitted a percentage over one hundred

**Current Cultural and Organizational Realities in Romania.
Using Applied Research to Bridge the Gap between
Western Management Theories and Local Management
Practices**

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Abstract

Purpose: To present the cultural and organizational realities in Romania and therefore to analyse how management theory can be used by managers of companies in Romania.

Methodology/approach: We reviewed the literature on the cultural dimensions of Romania, the dimensions of national culture, organizational culture and management culture. We conducted both qualitative (observation and unstructured interviews with managers of Romanian companies) and quantitative research (a survey was launched repeatedly in 2008, 2009 and 2010) to assess the organizational realities in Romania.

Findings: Through applied research, we define broad approaches in order to bridge the identified gap between Western theories and local management practices.

Research limitations/implications: Subjectivity that may characterise the analysis of data from qualitative research. Moreover, the data gathered through surveys might be influenced by the subjectivity of the respondents and their position in companies (management level).

Practical implications: Our defined broad approaches can be adopted by theoreticians, people from consultancy companies and managers in Romania.

Originality/value: Instead of looking for signs that Western management theory works in this local environment, we chose a practical approach, the final aim being to define suitable approaches in the Romanian cultural and organizational context.

Key words: cultural dimensions, management practices, Romania.

Introduction

Twenty years after the fall of the communist regime, the business environment in Romania is characterized by companies which still seek for proper management methods and instruments to successfully compete on the national and international markets. The accession of Romania to the European Union on January 1st, 2007 meant a step forward to a modern economy, with its good and bad aspects.

Knowing that “the Western theory and practice of management is based on the American culture of individualism” (Adizes, 2007:21), we analysed the current cultural and organizational realities in Romania in order to identify means to bridge the gap between Western management theories and local management practices.

Research methodology

Our research premise is that there is a gap between Western management theories, which are partly familiar to managers from companies in Romania, and the real situation from their companies. Thus, through applied research, we set out to define approaches which are derived from the nowadays cultural and organizational realities in Romania.

We used both primary and secondary research, as follows:

- The secondary research was used to present a general view on Western management theories and outline the cultural dimensions of Romania.
- The primary research was conducted to identify organizational realities in the current business environment in Romania. Thus we conducted both qualitative and quantitative research during 2007-2010. As part of the qualitative research we collected information through observation (during field visits to companies) and unstructured interviews with managers of Romanian companies. The quantitative

research was based on a survey carried out on a sample of companies in Romania; we used an online questionnaire. The survey was launched repeatedly in 2008, 2009 and 2010. In the first two years it dealt with the management level in companies from 15 counties in Transylvania, Romania. There were valid answers coming from 128 managers in 2008, 229 managers in 2009 and 210 managers in 2010 at national level.

Considerations on Western management theories

In the context of Western management theories we mention here the so called “elitist, non-democratic paradigm of management” (Adizes, 2007:22); the author considers that “founding fathers of management theory derived their insights about the process of management from their own experiences with hierarchically-structured, non-democratically-managed industrial or military organisations”. Moreover, Hamel (2007:4) considered that “management seems stuck in a time warp”. From here the author identified a real need for “reinventing management”. Thus, the road map for reinventing management defined by a group of scholars and business leaders, in May 2008, contained 25 moon shots, five from the ten most critical being: a larger purpose for management (such as: noble, socially and significant goals), the embedment of the ideas of community and citizenship in management systems, the reconstruction of management’s philosophical foundations (lessons can be draw from such fields as biology, political science and theology, the elimination of the formal hierarchies in favour of natural ones, the reduction of fear and the increase of trust (Hamel, 2009). Regarding this “road map”, we remark that the authors did not come up with any new concept; they have just defined new ways of using or developing these well known concepts from management theory.

Literature review on the cultural dimensions of Romania

Management theory and practice can be seen with the help of two main components: on the one hand “*basic* managerial activities that are the same and can be identified in any place in world” and on the other hand what “is nourished by the specificity of local community in which management operates” (Abrudan, 1999:19). The second component is deeply linked with local cultural dimensions.

The specialized literature on cultural dimensions of Romania is rich, an important number of studies having been published in the last 10-15 years. The Hofstede model of dimensions of national culture, an “extremely fruitful “framework but still with several “weak points, lacks and imperfections” (Sucală, 2006:63), was used by numerous Romanian authors. In fact, this model is valuable from the perspective of measuring differences between national cultures (Hofstede, 2001:73). But still, five from the seven national cultural dimensions from the Value Survey Module (VSM 08) revealed in the case of Romania, are: (Neculaesei and Tatarusanu, 2008)

- A high power distance, which means that there is still an unequal distribution of power in both society and organizations.
- An overall low level of individualism thus there is collectivism, meaning that people are integrated into strong groups, which offer them protection but also ask for loyalty in return.

- Both feminine and masculine values, which indicates that the population is concerned about both the quality of life, the care of the natural environment, the need for a good climate at the workplace and the need for materialistic achievements, recognition, and challenge.
- Quite a high level of uncertainty avoidance, which defines the need for rules, security and planned activities, in other words a high resistance to change and reluctance to risk.
- A medium level of short term orientation.

These results generally overlap with the ones of another study, of Mihuț and Lungescu (2006). Moreover, the results of the last one were comparable with the estimations made by Geert Hofstede for Romania. Thus, we can rely on these findings.

The organizational culture of companies can be analysed with the help of several models, such as: the Cameron and Quinn model (2006), the Organizational Culture Inventory® – that is used by the Human Synergetics International (2009) and so on. Several findings regarding the organizational culture of companies in Romania are:

- “There is a strong preference for the cultural orientations *innovation* and *objectives*, to the prejudice of cultural orientations *support* and *rules*” (Sucală, 2007:139-142).
- In the case of companies from Romania, as an ideal organizational culture, the Aggressive/Defensive styles prevail; with the competitive on the first place (Human Synergetics International, 2009:15). Thus, in these companies status plays an important role, the permanent aim being to out perform. But, according to the same source, the Constructive styles are also desired in companies from Romania. Thus the so called “receptivity for change” was defined.

The existing contrast that characterized the management culture in Romania can be presented using the “typology” of management orientations from Romania (Dalton and Kennedy, 2007:254):

- Traditional managers, named “yesterday's men”. They are largely unreformed managers who behave according to the administrative rules of hierarchy, procedure, bureaucracy and process.
- Entrepreneurial managers. They manage newly set up enterprises or they are engaged in innovation and in restructure of more established companies.
- Paternalist managers. They are still led by social values, such as communal obligations, maintaining employment, addressing social issues but they have managed to introduce change in their enterprises.
- Missionary managers. These are the expat managers, who often bring a new management culture. They can be both part of the solution (if they act as agents for change) and part of the problem (if they adopt the Western practices without any adoption in the case of local companies).
- Self seeking managers, named “nomenklatura managers”. They have quickly recognised the new opportunities in a de-regulating economy, knowing how to use their social networks.

Other several interesting findings regarding the management culture in Romania are:

- “The Romanian managers adopt Western management strategies (by belief in their value or by interest) that do not correspond to the cultural background of Romanian employees” (Heinz, 2002:296).

➤ Romanian leadership leans towards the autocratic style (55 percent versus 45 percent for democratic one) (Aioanei, 2006: 705).

➤ The preferred scores of questioned managers (according to the Leader Behavior Description Questionnaire XII) are high for (Littrell and Lapadus, 2005: 438-440)

- Representation – the extent to which a manager speaks as the representative of the group.

- Demand reconciliation - how well the manager reconciles conflicting demands and reduces disorder to system;

- Tolerance of freedom – which reflects the extent to which the manager, allows followers for initiative, decision and action.

And low, for:

- Tolerance of uncertainty – the tolerance of managers to uncertainty and postponement without anxiety or getting upset

- Persuasiveness - this measures the extent to which the manager uses oral persuasion and arguments effectively.

Our observation is that in most of the above mentioned studies, the respondents were managers. Thus, we can suspect of the presence of the desirability in their responses, and from here the relative value of the findings.

Organizational realities in Romania – Main characteristics

As we mentioned before, we repeatedly launched a survey to assess the main organizational challenges and the evolution of companies in Romania, in 2008, 2009 and 2010. The collected data, referring to 2007, 2008 and 2009 are presented in three Survey Reports, one for each year (Danis, 2008; Danis, 2009; Danis, 2010), the short versions being published on the web page of this consultancy company. As a first remark, we observed that there were no important differences among the results of these three surveys, an exception being the perceived impact of the current economic and financial crisis, in 2007 this topic didn't exist. Some of the main results of these surveys are the following.

A) The respondents' profile

- The sample was composed by managers, especially top managers (82.3 percent of the respondents in 2010 and 81 percent in 2009). These were both male (around 60 percent of the respondents) and female, without important differences from one year to another. Regarding their age, most of them were less than 51 years old (85.8 percent in 2010 and 81.4 percent in 2009). Considering their managerial education, 22 percent of the respondents (in 2010 and 2009) mentioned that did not follow any course, training or other specialization on management. The others 78 percent attended university studies (bachelor and master degrees) and trainings in management, or even graduated an MBA. Thus we can consider that most of the Romanian managers' knowledge comes from Western theories, not necessarily from their own experience (20 years ago there were not at all local theories about capitalism, only about communism). This is interesting especially when some of these managers are presenting highly elaborated theories that they listened to abroad. Some of these theories can be applied to local realities but some are useless.

B) Challenges to organizations

- Regarding the main challenges to their organisations, the questioned managers mentioned: the economic climate, cash-flows difficulties, the pressure to

raise the sales, the need to reduce costs, the desire to develop new products and services, and so on (without important differences between 2009 and 2008).

- The reaction of questioned companies to these challenges were: cost-cutting strategies, focus on core business, the launch of new products and services, the search for new markets, personnel reduction, the search for new strategic partners and so on (the differences between 2009 and 2008 being very small).

- As content, the two most important changes that organisations faced were the same, in 2008 and 2009, only in reverse order. In 2009 these were: (a) personnel cuts and restructuring (27.3 percent of respondents) and (b) strategic changes (related to the market, products, activity), mentioned by another 25 percent of managers.

- Regarding the capability of these organizations to face the change, the answers indicated a high level of contentment. Thus 52 percent to 84 percent of the respondents in 2010 (in 2009, the figures being 54 and 87 percent) said that they like how their organizations react to different aspects of change – creating, implementing, attracting subordinates, maintaining the momentum etc. The situation is critical, because from our point of view as long as the managers believe they are good they will not really try to make significant changes that are really needed in their companies.

C) The employees' motivation

- According to the questioned managers, the employees' motivation was average, without great differences in 2010 (6.68 out of 10) from 2009 (6.8 out of 10); in both years motivation was a little higher in organizations with 251-500 employees compared to others. Moreover, the perceived general atmosphere got worse, as 33 percent of the respondents in 2009 and 37.3 percent in 2010 considered that the situation was worse than in the previous year!

- The most relevant motivational factors for the questioned managers were the importance of the work - 94 percent in 2009 and 90 percent in 2010, the possibilities of development - 87 percent of in 2009 and 86 percent in 2010, and the content of work - 82 percent in 2009 and 86 percent in 2010. We remark the fact that the salary and other financial rewards did not appear in this top three of motivational factors, in fact they were on the sixth place in 2009 and fifth in 2010.

- Most of the demotivational factors for the questioned managers were the lack of development opportunities - 48.2 percent in 2009 and 42 percent in 2010, the relationship with the colleagues and the boss - 45.8 percent in 2009 and 48 percent in 2010 and the bureaucracy - 52 percent in 2009 and 44 percent in 2010.

D) The managers – competencies and challenges

Regarding the main ability of the post-crisis leader, the questioned managers mentioned strategic thinking - 17.8 percent of the respondents in 2010, followed closely by entrepreneurial thinking, the ability to capitalize opportunities - 16.3 percent of the respondents in 2010. This is interesting as a crisis needs short-term solutions from managers but people want to see the top managers able to think about the long-term future.

- The main two complaints of the questioned managers regarding their employees were: the low efficiency - 45 percent of the respondents in 2009 and 51.7 percent in 2010 and the low quality of work - 21 percent of the respondents in 2009 and 2010. Other complaints of the respondents were linked to employees' fluctuation, stealing and absenteeism.

- Managers considered that the main problems faced by them are a lack of skills in strategic thinking - 61 percent in 2009 and 82.4 percent in 2010 and low skills in people management - 75 percent in 2010. Other skills that should be developed by

managers from analysed companies were communication, motivation and team management, common in all three years of research.

E) Other important findings

- 59 percent of questioned managers said morale is not affected or by contrary by the reduction of the development budgets. Another 45 percent considered that the reduction of development budgets does not affect the company. We remark that those managers considered their own development to be very motivational (86 percent of the respondents) and complained about the low efficiency and poor quality of work in the last three years. Our conclusion is that as long as managers do not understand that the subordinates' development is their responsibility, they will continue to complain about subordinates and do nothing.

- Regarding social responsibility programs at the level of analysed companies, the situation is not the desired one. Thus, the percentage of companies not involved at all in social responsibility programs raised from 18.6 percent (Danis, 2008), to 25.5 percent (Danis, 2009) and to 34.5 percent (Danis, 2010).

Another interesting thing should be mentioned about the local managers' opinions. In June 2010, during a round table organized by Danis Consultancy, 25 local managers (Romanians and expats) were asked what they believed to be mostly needed by the managers to come. The first answers were: adaptability/ flexibility, more emotional intelligence and more responsibility. For the moment (June 2010) it was agreed that the most important skill is creativity. This Eastern point of view is very similar to what a recent Western study revealed to be agreed among managers as the most wanted skill for the manager-to-come: creativity (IBM Global CEO Study, 2010). In our opinion this conclusion reveals that Eastern and Western managers are becoming more and more similar by practicing the same profession even if in different places.

The gap between Western management theories and local management practices

In our opinion the Western theories about management were built for a kind of economy that characterized the last century. We adopted the view of Hamel (2007), who considered that the old management has reached the limits for improvement and this profession must be reinvented. It seems to us that the old taught theories should be replaced by new management theories. Therefore, we consider that there is a gap between Western management theories and current management practices, worldwide. Implicitly, the situation is valid in the case of Romania.

The surveys we conducted in the last three years were completed by discussions with managers either during semi-structured interviews or during trainings delivered to them. Most interviewees came from medium sized companies (200-300 people) and large companies (thousands of employees). Considering the gathered data, in our opinion the gap between Western theories and local management practices in Romania followed three stages:

1. In the '90s a lot of "traditional managers" gave no importance to Western management theories. They were only seeking to make money by using older connections, which was a major local practice. We often heard: "there is nothing I can learn from attending a political school". In fact, these were the "nomenklatura

managers”, defined by Dalton and Kennedy (2007). In that savage period surviving was the goal and a new generation of managers appeared.

2. After 2000, many multinationals came and brought a new management style. Younger managers, many trained abroad, brought theories they learned about and started to implement them here. Therefore, local managers understood they must also adopt those theories or their business will suffer. For almost a decade the Western theories became a religion and local experience was not much appreciated. This was possible as the Romanian and the global economy were doing very well so there was no reason to worry.

3. In 2009 the recession deeply affected most Romanian companies and it still is the case in 2010; probably it will be so for some more years. It was time to discover that some Western theories are not really working in this environment and many turned to those practices that seemed to be successful. The creativity of local managers was based both on Western theories and local practices, much more relying on local culture – how employees are, not how should they be. As a conclusion, nowadays managers are reducing the gap between Western theories and local management practices because they have to do this as tough times need intelligent solutions.

Conclusions

The current cultural and organizational realities in Romania can be seen in the context of a complex framework, where national cultural dimensions have had a great influence. Thus, for example a high power gap is still common in our culture, which could be a threat to the adoption of the so called “natural hierarchies” (Hamel, 2009:19). Moreover, the existence in our national culture of both feminine and masculine values is deeply validated by the results of our survey – the case of motivational and demotivational factors. We have proposed three main ways in order to bridge the identified gap between Western Management Theories and local management practices in Romania.

1. A new dimension of consultancy companies from Romania, which have both solid knowledge on Western theories and closed connections with the local business environment. From here, with the help of primary research, these companies can play a vital role by defining suitable management approaches to the national culture and organizational context.

2. A new approach regarding the personal skills and competencies of current managers. They should regain the self-confidence for what they are doing. In the last decades it was too often said that their experience is not relevant, that they are post communists and so on. But an economy increasing by 8.5 percent annually needed quite good managers, at least for the local culture of subordinates.

3. A new approach of management theories that are taught to local managers, which should be balanced with the characteristics of the current economic and business environment and also with their local experience. Moreover we consider present times to be a major opportunity. Old theories must be replaced with newer ones and in this process local managers should be involved.

Certain research limitations should be considered, such as the subjectivity of the respondents, the case of quantitative research and of the analysis in the case of qualitative research.

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Practical Use of Theory by Practitioners: Perceptions of Executive Graduates

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Abstract

Purpose – *The aim of the paper is to contribute to the debate about the adaption of theory to Romanian socio economic context and its use by practitioners that graduated an executive program in management.*

Methodology/approach – *A sample of graduates were interviewed and surveyed regarding their perception on the adaption of theory to Romanian context, their use of theory and the factors that might influence such the use of theory in business life.*

Findings – *Practical use of theory is influenced by personal factors such as position within the hierarchy, optimism, and year of graduation, etc. but also by external factors such as the economic crisis, the type of company and the level of industry competitiveness. Another range of influencing factors relates to the Program context and includes delivery mechanisms and adaption of theory.*

Research limitations/implications – *Whilst based on a small sample of respondents, the survey identifies potentially fruitful topics for further research.*

Practical implications – *Further understanding of Personal, Environmental and Program related factors would enable the Postgraduate Schools to better customize their programs and enhance the knowledge transfer process to practitioners.*

Originality/value – *The paper identifies three groups of factors influencing the perceived adaption of theory to Romanian context and its use by the practitioners. Students experience were enhanced by the debates triggered by the diversity of background knowledge from their fellow colleagues.*

Key words: *Theory adaption, management*

Introduction

The transition in Eastern Europe is long and profoundly transformation process. Whilst reluctant, many executives had little faith in management theory, claiming that it is “Western”; it should be adapted and probably would not fit to Romanian context. And that it is not only the Romanian managers’ opinions but also other practitioners and researchers, as European Business Review dedicated a Special issue in 2008 to management theory and practice.

Brennan (2008) presents a very interesting debate on the “gap” between theory and practice in management in economics, nursing and marketing. In economics the criticism was directed to the highly formal mathematical methods employed, in nursing the debate focused on the efforts to overcome barriers to implement best practices and in marketing on the difficulties faced by managers in using academic theory as these is difficult and irrelevant. Practice theory gap in marketing is analyzed by Adrley (2008) on textbook theories and marketing practice, Holbrook (2008) on the gap between academic research and management practice in marketing and consumer research and Centeno et.al (2008) on postgraduate marketing education.

Baker (2008) expresses similar opinions in marketing and draws the attention on the academic development of theory that uses models. The more sophisticated the model, the more accurate but also more difficult to use and understand. A model to be useful it must take into account all the relevant factors, that most of the times are interdisciplinary: economics and psychology to name just two. Baker (2008) also draws the attention on the interest of researchers that “know a great deal about a very small

topic of possible relevance to practicing marketers but have little or no interest in the practice itself (p. 531)“.

Aim of study

Aiming to understand how the Western management theory was transferred to, adapted by, verified or declined by practitioners in Romania, I initiated an exploratory research. It investigates the opinions of Executive Graduates from Center for Education and Training Excellence (CETEX) from “Gh. Asachi” Technical University of Iași, Romania.

Adults are increasingly enrolling into secondary education, for various reasons ranging from self fulfillment and personal achievement up to being forced by legislation or in-company requirements, or just by the drive for status provided by the diploma. My interest is limited only to those genuinely interested in acquiring managerial knowledge in various postgraduate education formats, and their perceived utility based on its practical application.

Therefore I wanted to make sure that I select the appropriate sample of graduates form CETEX MBA and investigated their reasons for choosing it (see figure 1), where did they hear about the program (figure 2) and which was the most influential factor in the decision making process (figure 3).

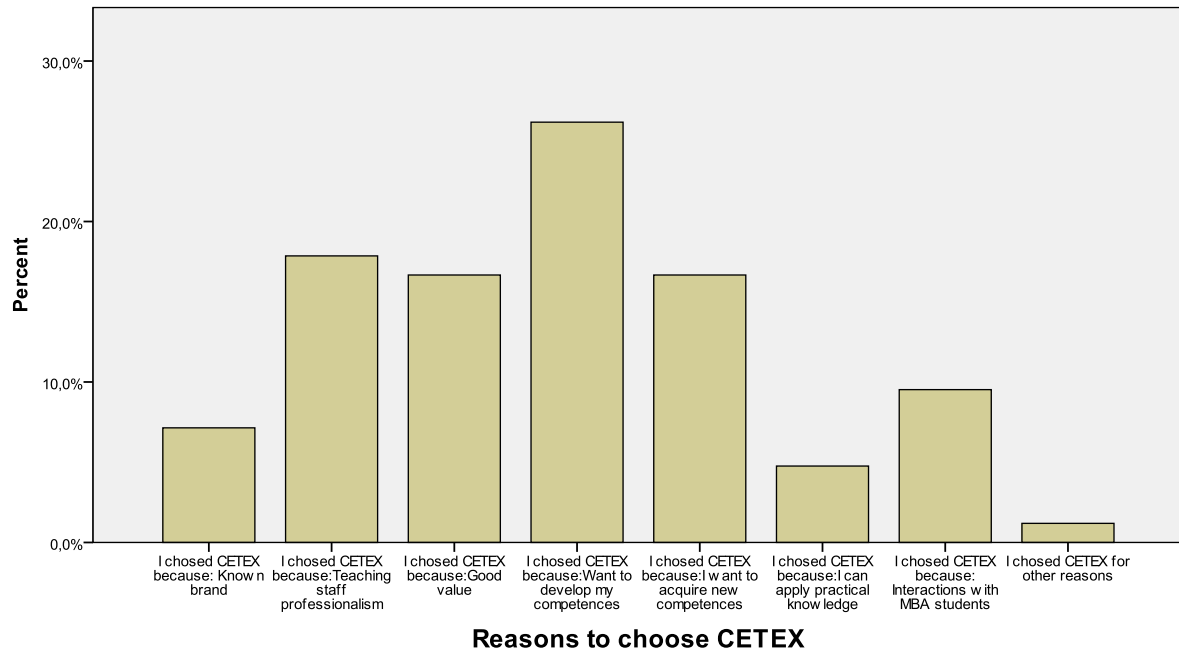


Fig. 1. Reasons for CETEX

Nearly 30 percent of respondents reported that they seek to develop their existing competences. Other important reasons for choosing CETEX include teaching staff professionalism, good value and the need to acquired new competences.

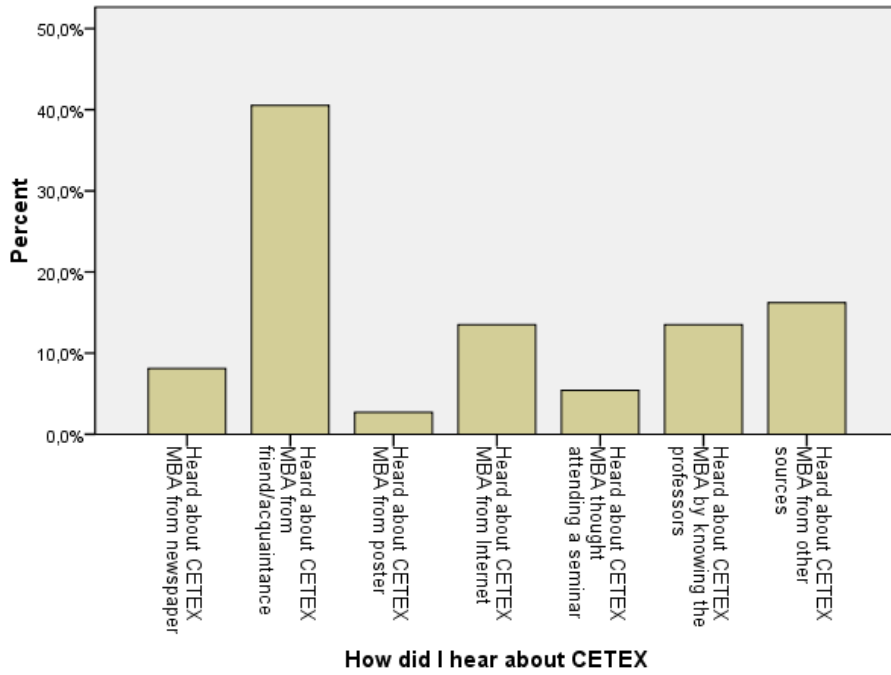


Fig.2. Information sources for CETEX Executive Program

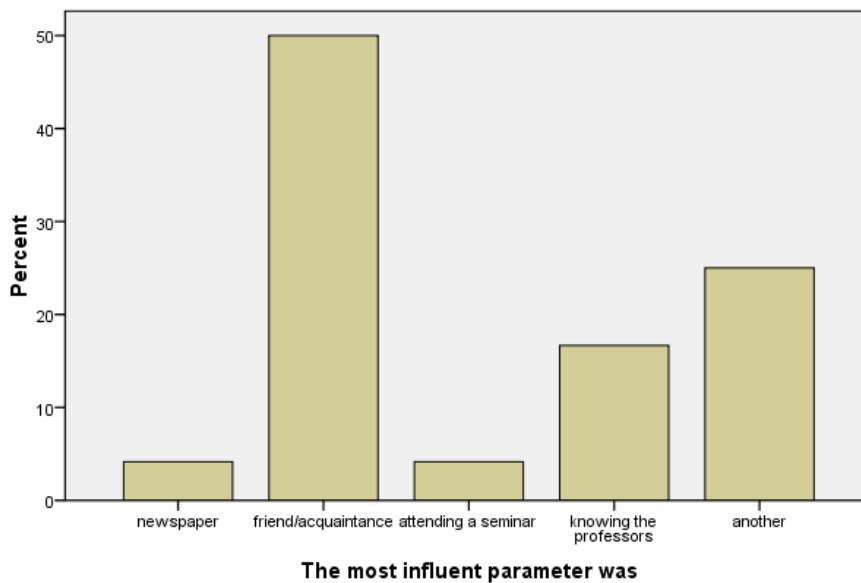


Fig. 3. Most influential factor in the decision making process

Personal recommendations represents by far the most important factor that affected the decision making process towards learning in a prestigious program, and encourage the future graduate to become part of a “community” of other colleagues that had a great time studying, interacting with each other and overall find it useful in attaining their personal goal.

Methodology

Research started with in depth interviews with experts, academic staff, students and graduates. They were requested to provide information regarding the reasons why they had chosen CETEX and describe their perception about the lecturers and the usefulness of theory transmitted during lecturers and seminars.

From a “consumer behavior” point of view, the practical use of theory acquired during the classes, will be influenced by two factors: the person and its environment, which represents the basis of the papers’ conceptual framework (see figure 4). I further divided the environmental factors into general factors and those related to CETEX. The general factors include the economic crisis, the level of competitiveness of the industry and the type of company. CETEX influence would include student’s perception regarding the degree of adaptation of Western theory to Romanian socioeconomic, and cultural context, and the delivery process which bases on the use of case studies, class discussions and debates, project work and presentations of groups results, use of software and simulations, and the quality of the academic staff that includes their personality, professionalism, use of real life examples, etc.

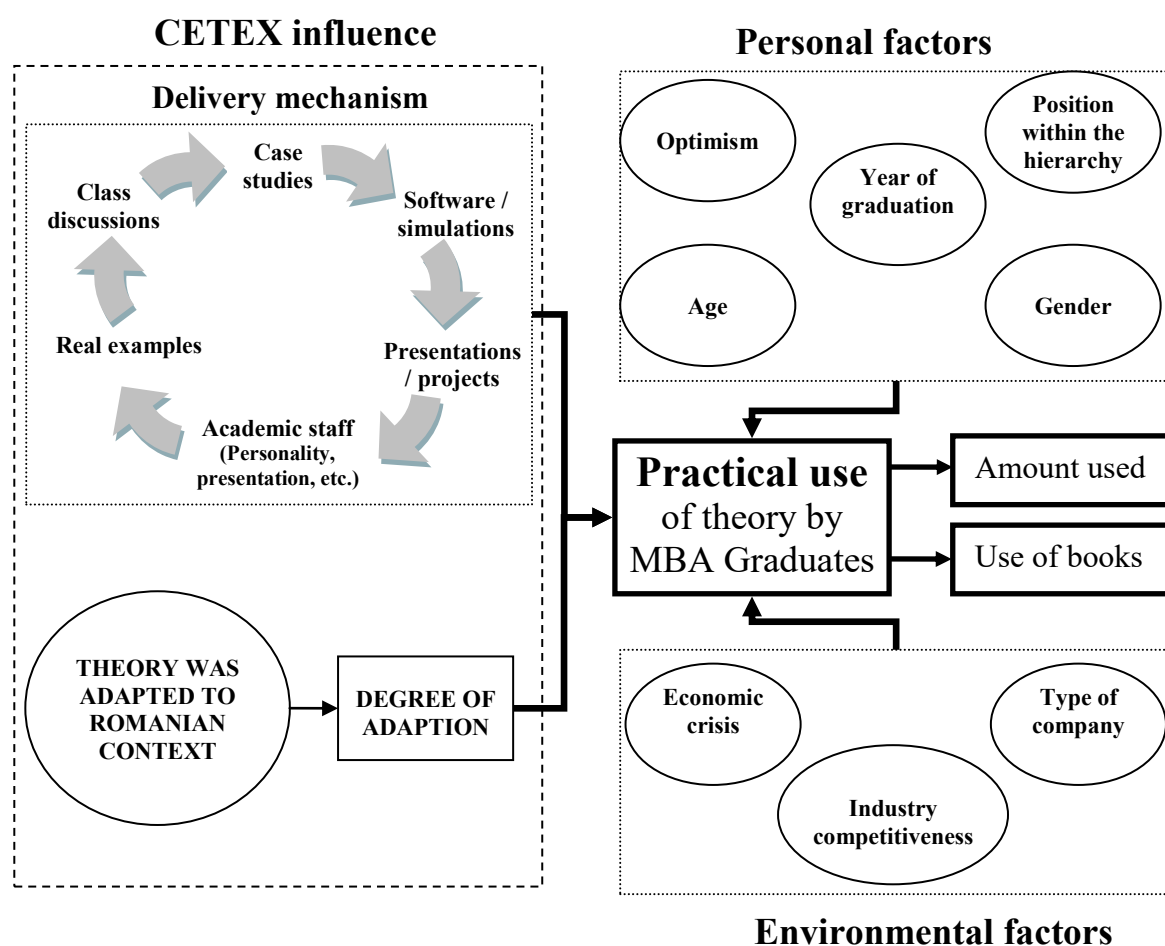


Fig. 4. Conceptual framework of the research

Optimism is used in this context as a substitute for hope, as I considered difficult to ask people if they have hope. Snyder (2000) cites one of his previous definitions of hope as "a positive motivational state that is based on an interactively derived sense

of successful (a) agency (goal-directed energy) and (b) pathways (planning to meet goals)" (Snyder, Irving, & Anderson, 1991, p. 287). He presents a simple and interesting trilogy goals, pathways and agency to contextualize the sense of success in attaining goals.

Snyder observed that people used goals when they "were trying to get something done". These must be important to the subject and it must exist a degree of uncertainty in attaining it. In order to attain its goal, the subject must have the ability and be able to design its own plausible routes to goal that represents the pathway. Snyder defined agency as the driver that would push the subject along his imagined routes to attain his or her goal, and reflects own perception of capability to achieve the goal and perseverance to follow through, and often find new path in order to overcome barriers that might block the way towards the goal.

The research did not aim to investigate respondents' goals but rather if they would perceive the theory to be useful. Therefore, personal level of optimism may influence their perceptions and consequently the amount of theory used and use of books (see figure 4).

The sample consists of 150 graduate students, out of which 52 provided useful answers. Graduates were contacted directly, or by e-mail.

Limitations

Whilst the research basis on a small number of responses, these had been complemented by interviews and informal face to face discussions during completion. The research may be biased by the survey methodology such as receiving responses only from those with a more positive attitude towards CETEX and possible lack of information from those that had changed their e-mail address and could not be contacted.

Findings

Sample structure

Age distribution of the respondents is depicted in figure 5. Whilst about 40 percent are 35-45 years old, there are very few younger than 25 and nearly 30 percent older than 45. Figure 6 exhibits sample distribution according to the year of graduation. Over 70 percent of the sample consists of people that graduated during the last three years. A large part of the sample graduated over five years ago and was surveyed during the Anniversary of 10th Promotion of Graduates in Bacău.

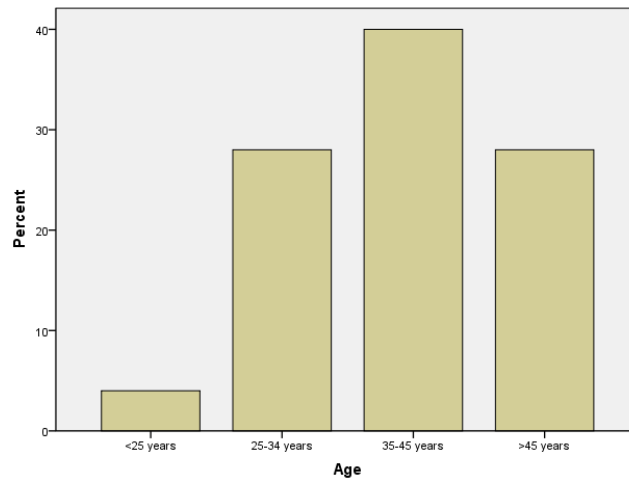


Fig. 5. Age distribution of the respondents

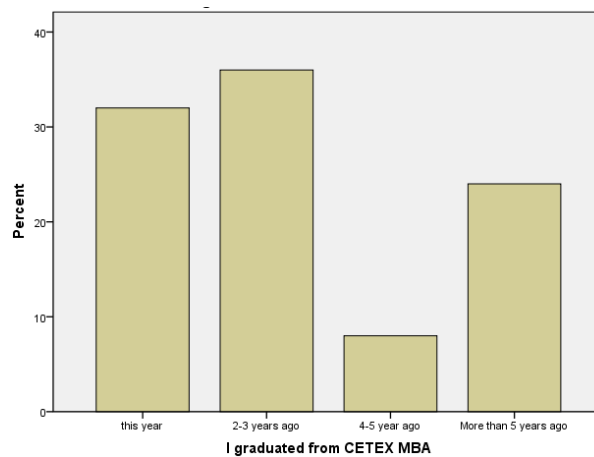


Fig. 6. Sample distribution according to the year of graduation

About 80 percent of the graduates reported to work in a large company, 50 percent reported that their company has private capital. Sixty percent of the respondents are men. Less than 20 percent of the respondents reported that they do own a company. The respondents in the sample reported that their industry's competitiveness is normal (35 percent), high (30 percent) and very high (35 percent).

During the last 3 years, nearly 40 percent of the respondents reported to be part of top management, out of which about 8 percent reporting to be CEO. About 45 percent of respondents are middle managers.

Practical use of Theory

Most of MBA graduates perceived that the western theory was adapted to Romanian context to a large and very large extent (see figure 7). About 35 percent of the respondents expressed their discontent with the theory they received during classes. Such perception may be due to the lecturers that maybe did not find the optimal way to transpose Western thought to Romanian context or may be due to the students that have an uneven interest across various subjects form the Program.

A similar distribution of responses was reported regarding the percentage of applied theory (see figure 8). Nearly half of them reported to use 50-74 percent of theory presented during classes and about 10 percent over 75 percent. These responses correlates very well with the other indicator of the usefulness of theory, in latent form by the use of the CETEX course support books (see figure 9). Beyond the percentages, most of the graduates reported during interviews the usefulness of the support material for each course. They said that books provide both comfort and support by “knowing that knowledge exists” and is neat, organized and useful, and they “sometimes” or when in need “to solve a problem” they look into the reference materials.

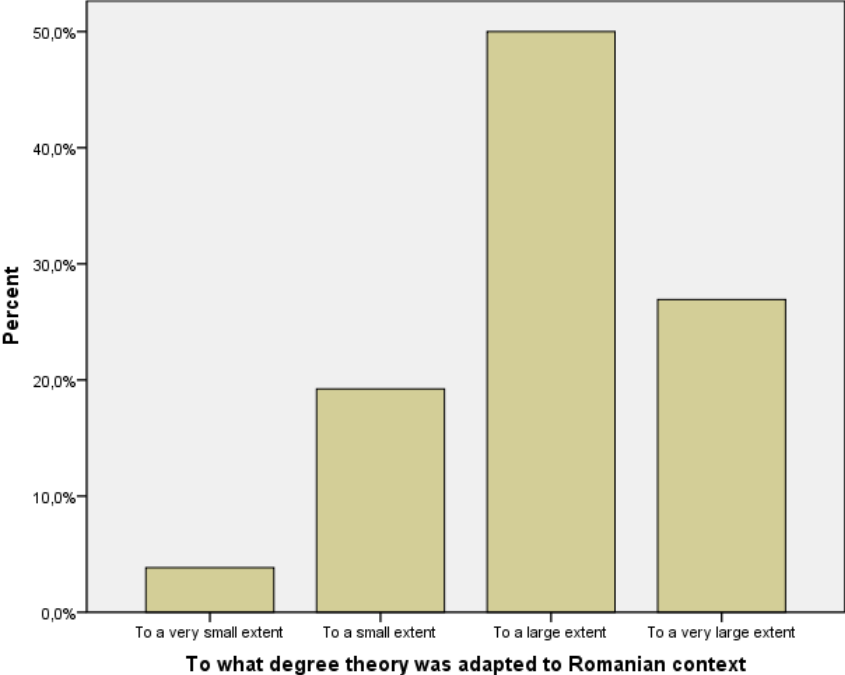


Fig. 7. Western was adapted to Romanian context

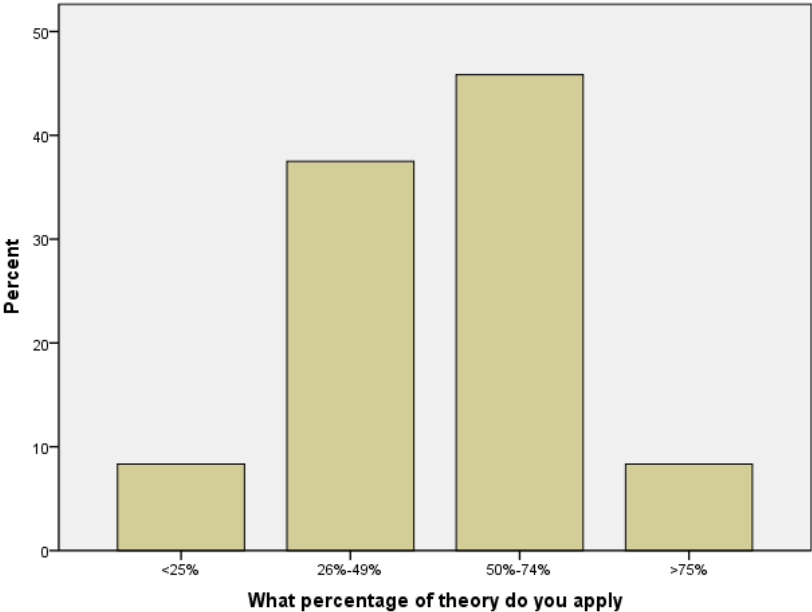


Fig 8. The percentage of applied theory by the student

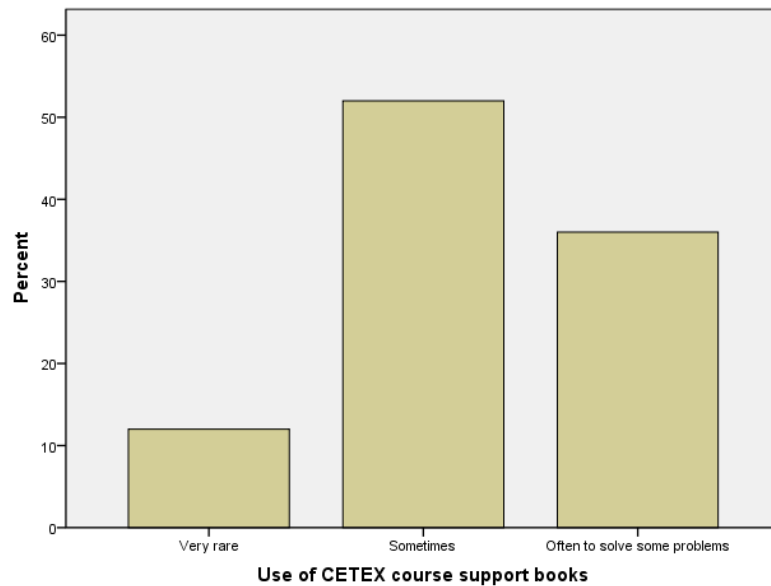


Fig 9. Reported frequency to use CETEX books

CETEX Influence

Respondents were asked to rank the factors according to their perceived influence upon practical application of knowledge (see figure 10). The graph was constructed based on summation of the individual rankings for each factor. Whilst the most important factor is “Real examples”, followed by “Case Studies” and “Teaching staff”, the analysis of each factor distribution revealed an interesting image.

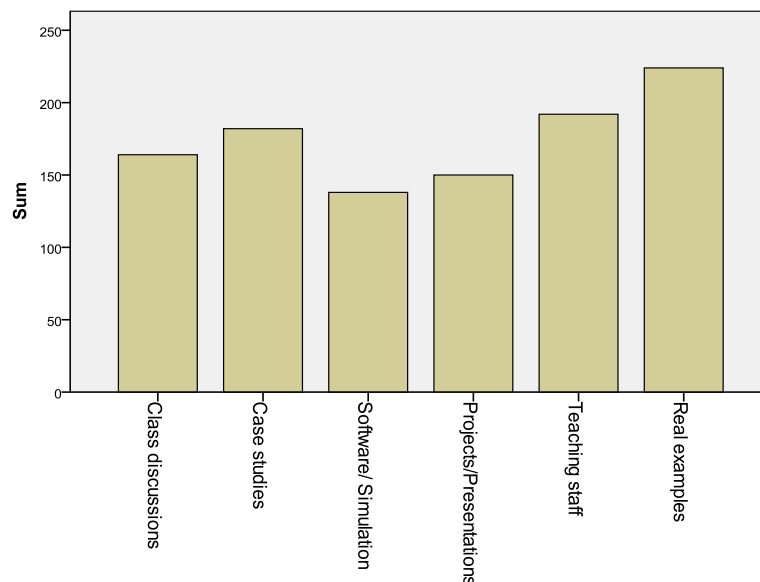


Fig 10. Factors influence upon practical application of knowledge

Real examples received “Very large” and “Most influential” ranking by about 70 percent of respondents. Software/simulation is the worst with nearly 60 percent of responding ranking insignificant / very small influence. Surprisingly nearly half of the respondents reported small, very small and insignificant influence for class discus-

sions, case studies and project/presentations. Less than 40 percent of respondents provided such low ranking for teaching staff influence.

Personal Factors

In order to understand the influence of “optimism” upon application of theory the respondents were required to express their optimism level (see figure 11).

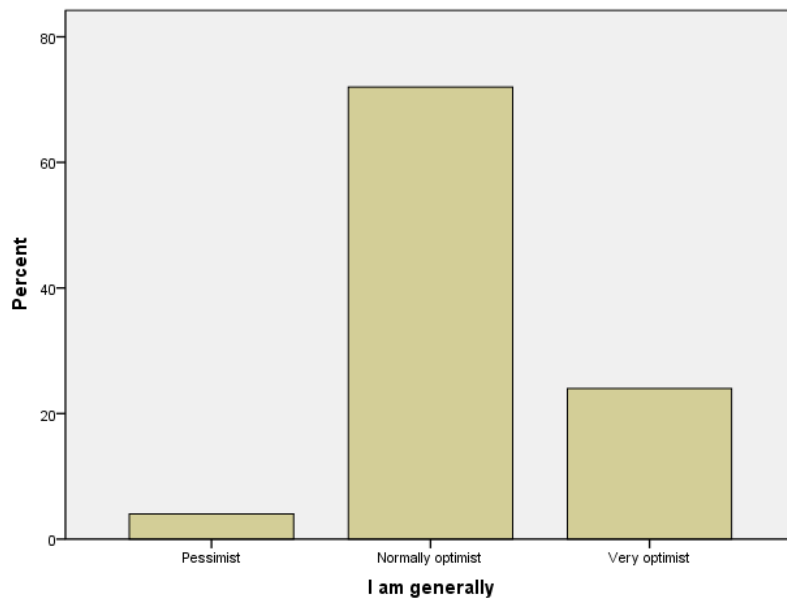


Fig. 11. Self perceived level of optimism

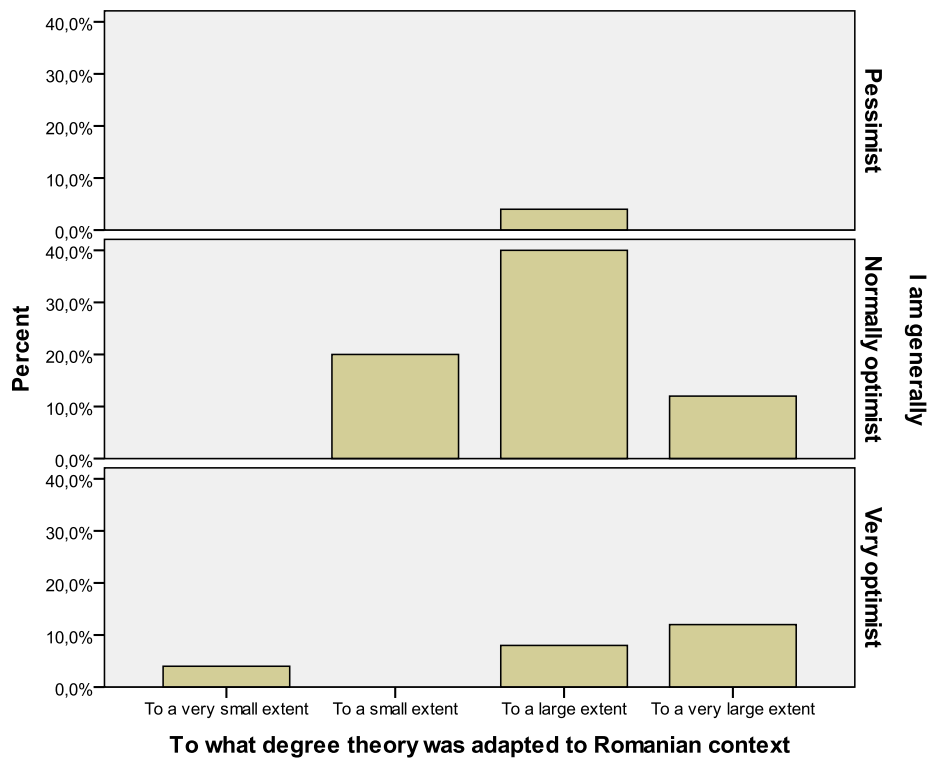


Fig. 12. Adaption of theory to Romanian context structured by the level of optimism

It is interesting that one “Pessimist” reported that perceived the theory to be adapted to Romanian context “To a large extent” and a “Very optimist” that the degree of theory adaption was to a very small extent (see figure 12). These results should be further investigated based on interviews in order to provide a better understanding of responses.

During initial interviews respondents signaled various degrees of frustration regarding perceived knowledge acquired during program and expressed difficulties in providing solutions and apply knowledge. Subsequent questions revealed perceived lack of access to the decision making process (see figure 13).

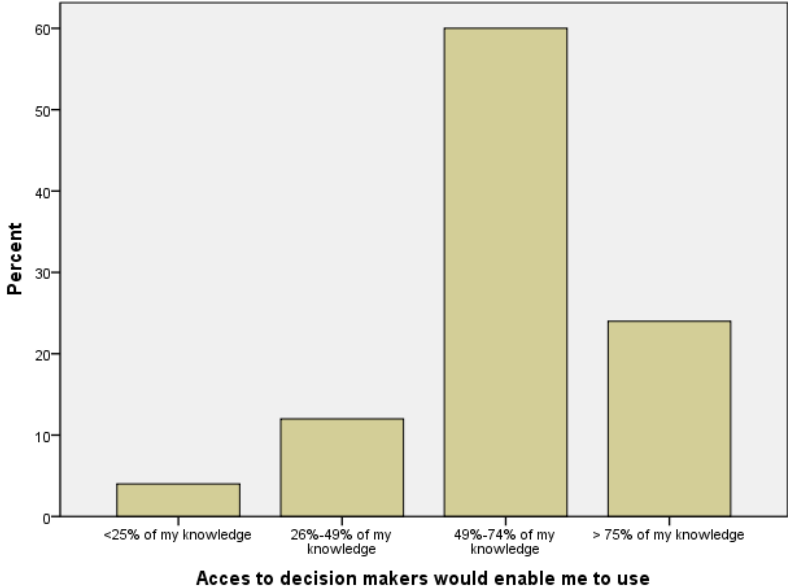


Fig. 13. Perceived influence of access to decision makers upon practical application of knowledge

Only about 45 percent of respondents from the sample reported to be middle managers, and about 40 percent perceived to be part of top management, and less than 10 percent reported to be CEOs. Whilst nearly 60 percent of respondents reported that access to decision makers would improve the use of 49-75% of own knowledge, and over 20 percent reported that access would enable them to use over 75% of acquired knowledge. Such reports may signal that many of those reported to be part of top management would still seek higher responsibilities and perceive that do not have sufficient influence to the decision makers, that may explain the concerns expressed during preliminary interviews.

A further analysis of the distribution across the perception of adaption of theory to Romanian context reveals that those that perceived adaption to a very small extent also considered that access to decision makers would enable the use of less than 25 percent of own knowledge. The respondents owned their companies and were probably discontent.

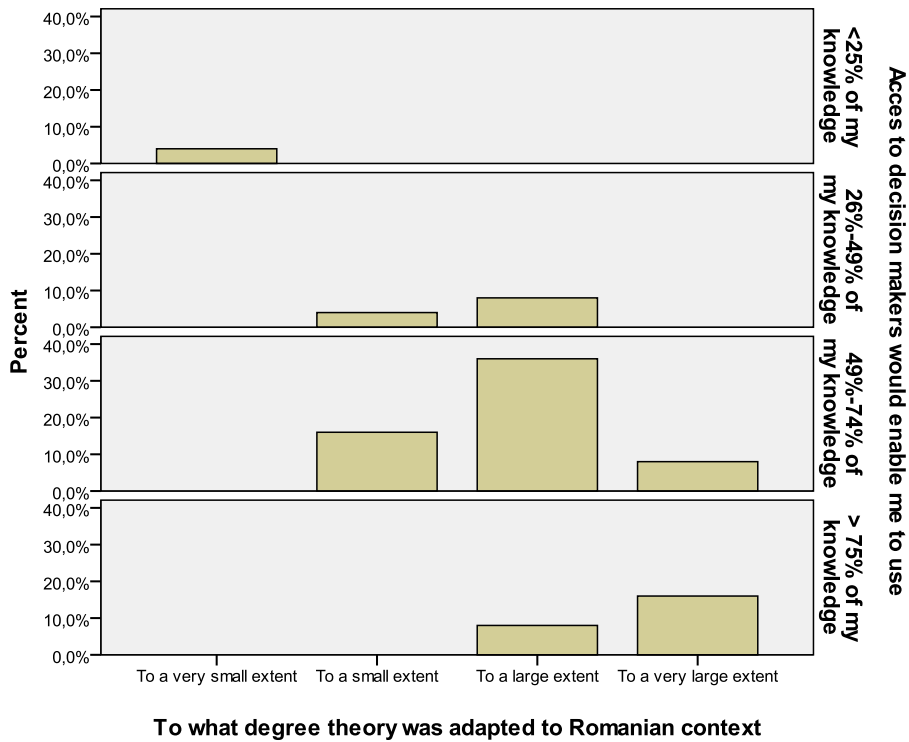


Fig. 14. Adaption of theory to Romanian context structured by the perceived use of own knowledge if subject would have access to decision makers

Environmental factors

The economic crisis that affects us may also be a controversial factor that would influence the perception theory usefulness.

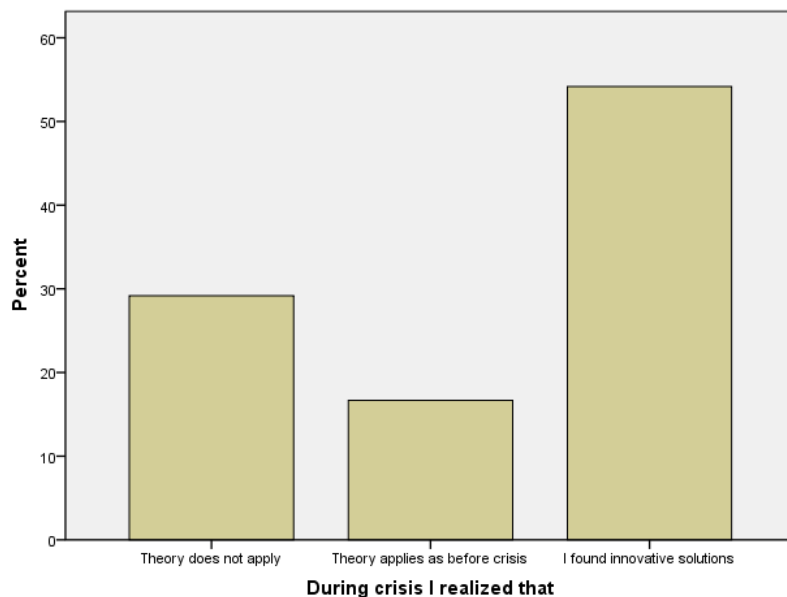


Fig. 15. Influence of the crisis discussions upon practical application of theory

Only 30 percent of respondents perceived theory as not applicable, whilst over half reported usefulness in providing innovative solutions. It is interesting to note that about 20 percent of those that reported it not applicable considered theory adapted to Romanian context “To a large extent” (see figure 16).

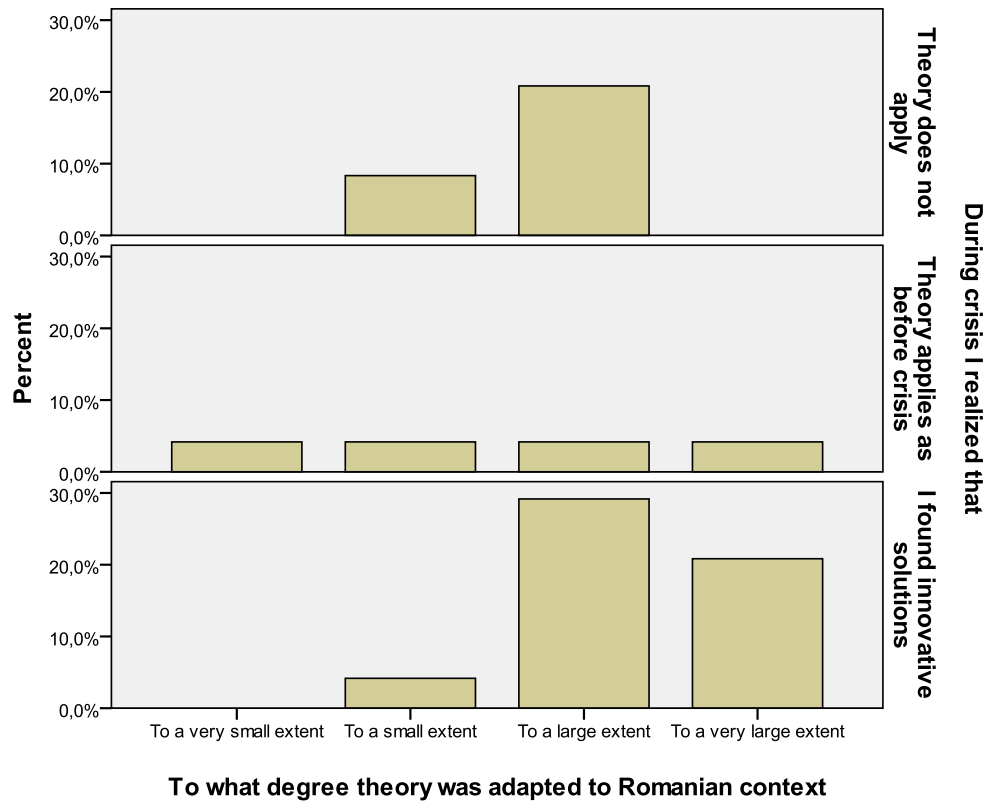


Fig. 16. Adaption of theory to Romanian context structured by the perceived use of own knowledge if subject would have access to decision makers

Discussions

External environment

Respondents reported a relative even distribution Industry competitiveness, but all those that reported a very small degree of adaption of theory to Romanian context. Industry specific conditions could affect the perceptions of theory usefulness more than overall perceived level of competitiveness (see figure 17).

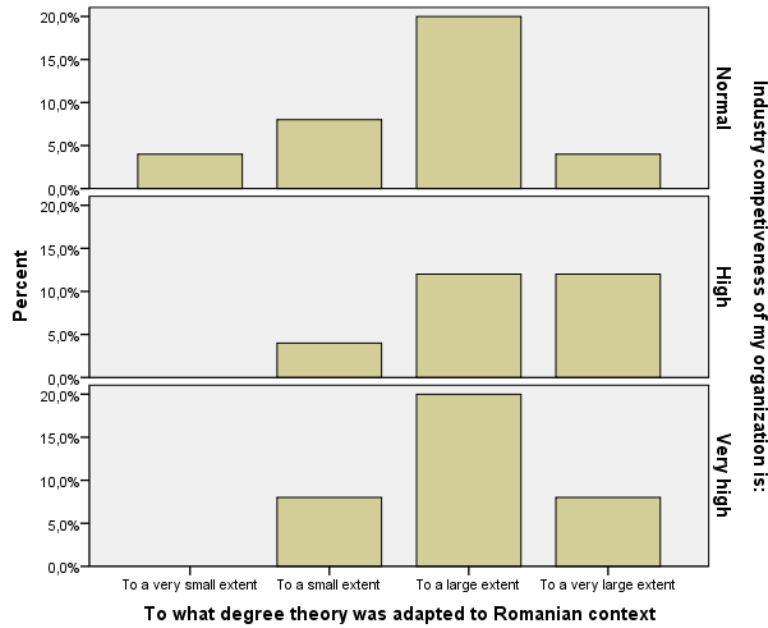


Fig. 17. Adaption of theory to Romanian context structured by the perceived industry competitiveness

There is a clear split among the respondents from small firms. Some were clearly discontent whilst others reported a good fit of theory to Romanian context. Such observations are normal, considering that many of the theories and course structure are rather for large companies. Nearly 60 percent of respondents from large firms reported a good or excellent adaptation of theory (see figure 18).

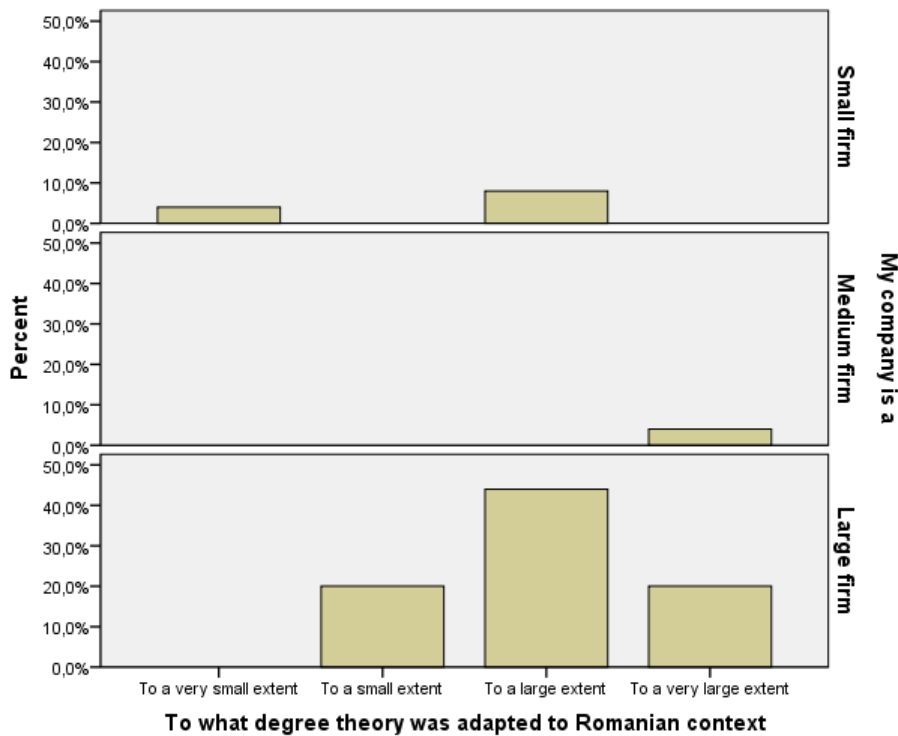


Fig. 18. Adaption of theory to Romanian context structured by company size

Personal factors

Position within the company's hierarchy was considered another important factor that would affect the perception of adaption and consequently of use. All CEOs reported perception "To a large extent". The largest spread of responses occurred for "Top management" (see figure 19). Subsequent analysis of respondents from top management revealed that those reporting "To a very small extent" are top managers/co owners of small company, that during interviews complained about some in depths numerical analysis courses, programming that were much more suitable for medium and large companies. They also agreed during interviews that their colleagues from multinationals or other medium or large companies found those subjects interesting and useful.

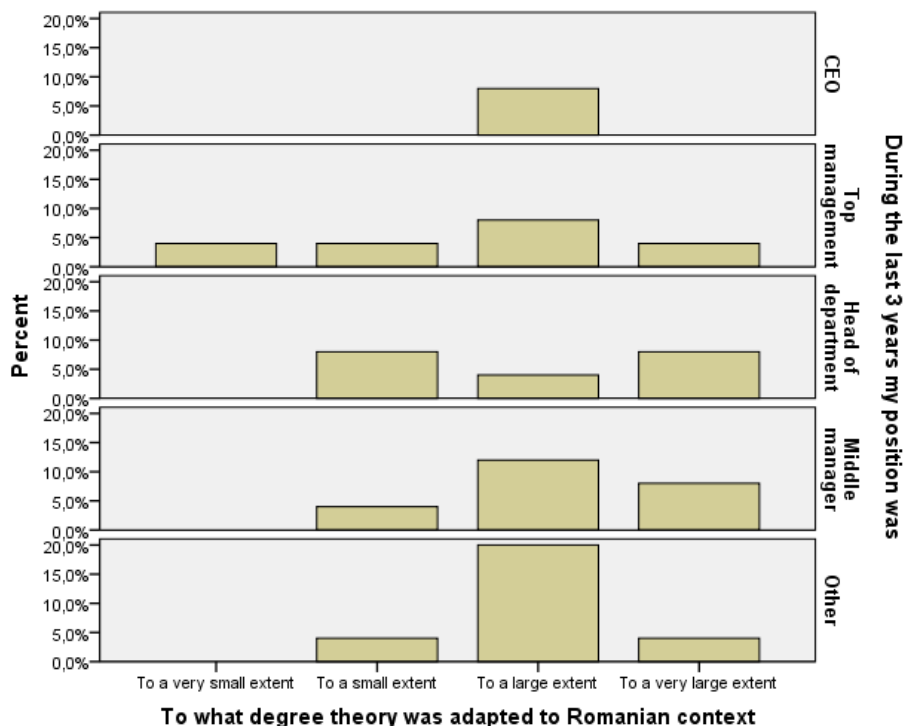


Fig. 19. Adaption of theory to Romanian context structured by respondent position within the company

Year of graduation seems to have no effect upon the perception of theory adaption, with the exception of "This year" graduates (see figure 20). Such behavior may be explainable by time passing that might smooth the "discomfort". Responses are relatively bell shape around "To a large extent".

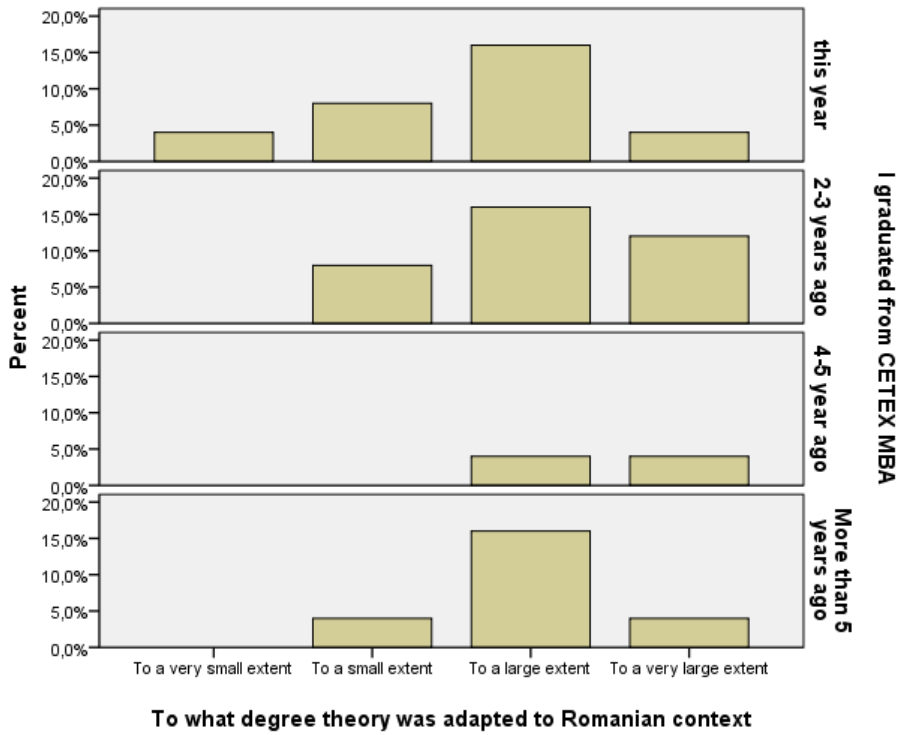


Fig. 20. Adaption of theory to Romanian context structured by the year of graduation

Without being able to generalize, it seems that the older respondents (over 45) seems to have a more positive perception regarding the adaption (see figure 21).

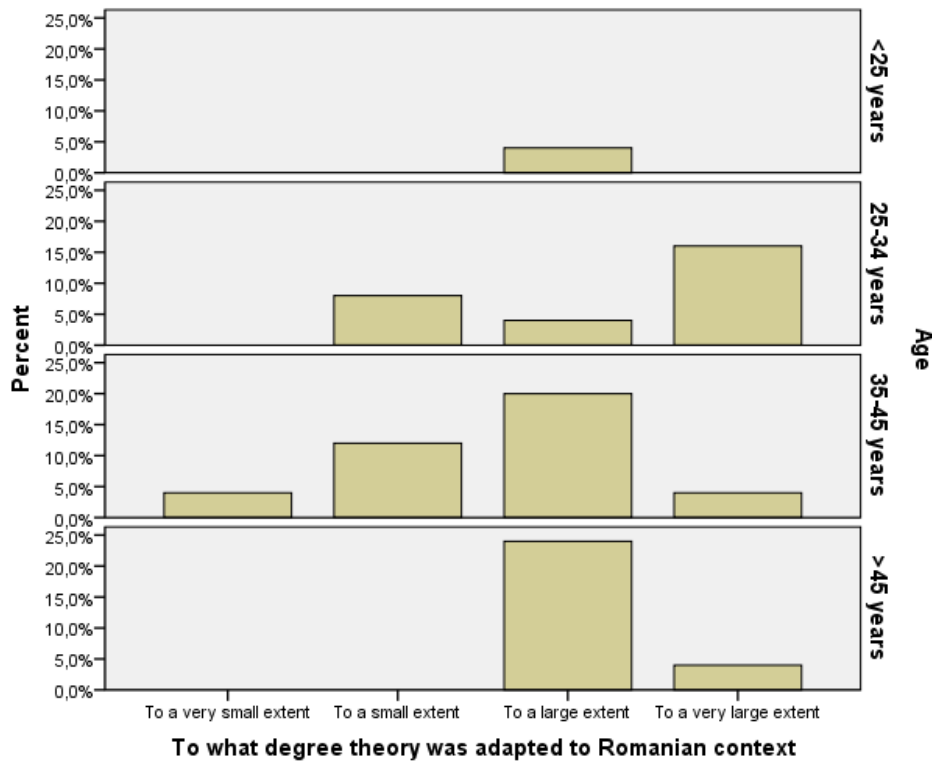


Fig. 21. Adaption of theory to Romanian context structured by the age of respondent

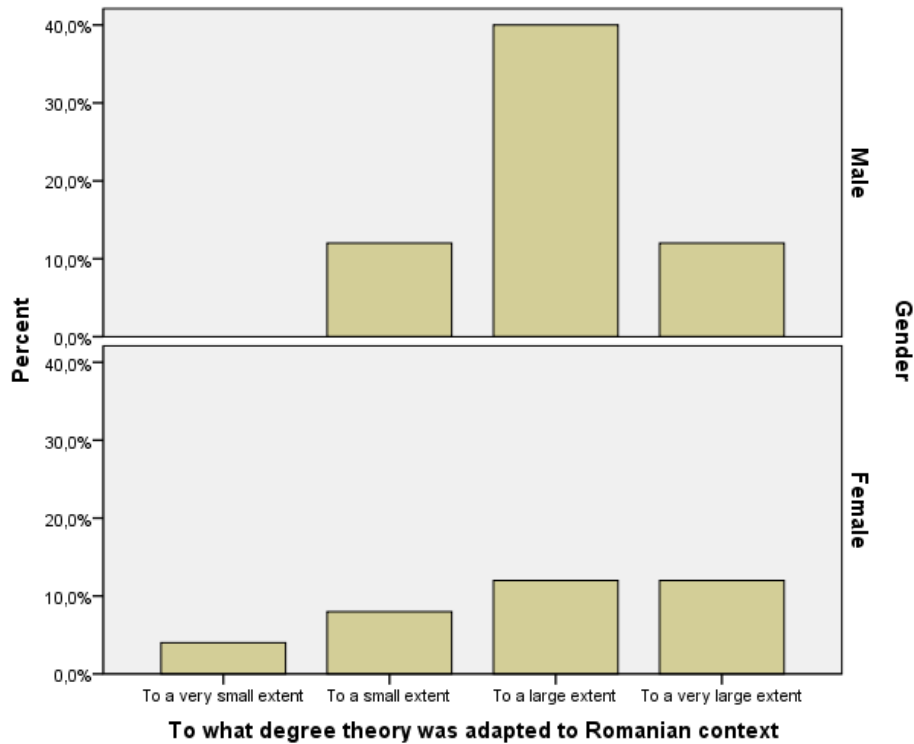


Fig. 22. Adaption of theory to Romanian context structured by the gender

The larger number of males from the sample is probably de cause of larger percentage of responses “To a large extent”, but both genders provided their answers centered on this perception (see figure 22).

Discussion and conclusions

Theory adaptation to Eastern European socio cultural context had been made successfully by all business schools from Eastern European countries, as proven the results exhibited in this paper by CETEX in Romania.

Whilst not making an in depth analysis of the reasons for adapting and using the theory, the research provides a debate upon the perceptions of practitioners that graduated CETEX Executive Program on theory adaption the factors which influence its use.

Nearly 80 percent of respondents reported theory to be adapted to a “Large and Very large extent” to Romanian context. Such responses would imply that CETEX experience and its knowledge transfer is positively perceived, as 50 percent of respondents indicated that they use 50 to 74 percent of theory, and nearly 10 percent of respondents indicating a percentage of over 75%. Respondents also indicated using “Sometimes” the books received for each subject and “Often to solve some problems”.

The most important factor revealed by the survey that influence practical application of knowledge is “Real examples”. These examples were transmitted to the students two folds: during lecturers and during the discussions among participants, as one respondent suggests:

“The exchange of knowledge among participants of the class, sharing personal experiences accumulated by each of us are very important. On these, we can apply the more sophisticated theories and refine those based on case studies.”

Such interactions make an important transition from “Pure theory” to practical application in the daily work of a manager, easing and enhancing the adaption process initiated by the Program. As another respondent suggested:

“The more we would try to bring the Subject curricula to the real world, using own competences acquired in their jobs and positions, as well as using the colleagues competences during workshops and class debates, the better the collective competences acquired during classes will be put to effective use for each of us in our professional careers.”

Whilst based on a small sample of respondents, the survey identifies potentially fruitful topics for further research that will provide better understanding of the practitioners’ use of theory in various industries and hierarchical positions.

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The Pathway of the Romanian Cement Industry to Sustainable Development

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Abstract

Purpose – To connect events, look at the driving forces, and provide insight in order to bring a better understanding of the transition the private cement industry has made towards becoming one of the industries most actively committed to sustainable development in Romania.

Methodology/approach - We account chronologically for the nationwide evolutions in the cement manufacturing industry and benchmark them against the principles of sustainability and the specifics related to operating in a free market.

Findings – In the long run, there is a mutual reinforcement between supporting the development of a free market and the drive towards sustainability.

Research limitations/implications – The considered set of driving forces and the presented sequence of events describe and relate only to the dynamics of the cement industry in the post communist environment.

Practical implications – While it is our belief that the findings apply to all economic entities and to all areas of the economy, they have been proven only in the case of one segment.

Originality/value – The paper offers a good overview of the way the traditional western management theory was adapted and applied by the cement manufacturers in the context of an economic environment in transition from the communist to the free market model.

Key words: *privatizing, competitive advantage, sustainability.*

Introduction

In the last 20 years the cement industry in Romania has trended constantly upwards in all aspects until it was hit, like all industries, by the global economic crisis.

While visible moves in the evolution of the cement industry were acquisitions, transfers and expansions of production capacity by one player or another, other factors that shaped the industry, such as vertical integration and the drive to improve environmental, quality and safety performance were not that apparent. Herein, we will attempt to connect events, look at the driving forces and provide insight in order to bring a better understanding of the transition the private cement industry has made to become one of the industries most actively committed to sustainable development, in Romania.

The Romanian cement manufacturing industry has entirely changed ownership in the two decades following the collapse of communism in December 1989. Although significantly delayed, happening at the end of the 90s, the privatization of the cement industry is still an example of a rather early complete transfer of ownership from the public to the private sector by comparison to other industries.

In the centralized communist economy, most of the cement production facilities were placed and built in such a manner as to best serve the urban and industrial development of the country, considering mainly the transportation distances and the ease of delivery. The resulting geographic distribution resulted in the best market coverage at minimum transportation costs. That distribution remained a strong point after the collapse of central control, in that the competition had no immediate access to the regional market. However, most of the cement production facilities were also confronted with a number of problems. The ownership of a significant number of rail wagons, of rail engines and of maintenance and repair facilities for these is an example of

such a problem. A different issue was, in several cases, the inclusion in the production line of adjacent asbestos lines, producing asbestos cements and asbestos based construction materials. Last but not least, limited control over the raw material reserves was possibly one of the biggest challenges that the industry faced in the early years, together with old equipment and generally, old production technologies.

Entrance of global players into the Romanian market

The transfer of ownership began relatively late in 1997, when the world's largest cement manufacturer, Lafarge, purchased the Romanian cement producer Romcim SA. By doing so Lafarge acquired four of the nine production facilities existing in Romania at the time – Medgidia, Alesd, Hoghiz and Targu Jiu, together with 42 percent of the internal cement market [1]. In the same year Holderbank Cement, the main challenger to Lafarge's industry leadership position, later to become Holcim Ltd., acquired its first production facility in Romania – the Turda cement plant. Therefore, by the end of 1997, five of the nine cement plants had changed ownership from the public to the private sector. In 1998, Heidelberg Cement, another world producer, made its entry into the Romanian market by purchasing one of the remaining plants: Moldocim SA Bicaz. The late nineties, however, were marked by rather unstable market conditions, with high inflation and little development in the construction sector. The above acquisitions were therefore perceived as relatively risky business, the highest risk being Lafarge's. As a reflection of this situation, the Lafarge Romcim shareholders decided in 1999 [1] to sell the cement plant in Alesd, aiming to reduce the portion of the cement market they could cover and direct the remaining resources into other areas of interest for Lafarge: concrete, gypsum, lime and mortars. The purchase offer and the subsequent acquisition were made by Holderbank Cement which, through this acquisition, achieved a stronger position on the Romanian market. In October 1999 the same group bought another production facility, the Campulung plant [2] and, when the transaction with Lafarge was completed in 2000, it increased the number of owned plants to three and the overall production capacity to roughly a third of the country's total production. The remaining two cement plants, Casial Deva and Romcif Fieni were acquired by Heidelberg Cement later on, in 2000 and 2002 [3], thus completing the transfer of ownership of the industry.

Strategic moves targeting competitiveness

One of the first decisions made by the three cement manufacturers was to focus on their core business: manufacturing and distribution of cement based materials. One initiative was to dismantle or sell of all the existing rail assets. In other cases, the foreign companies did not acquire related production lines, like the ones making asbestos cements.

Vertical downstream integration into concrete making was another strategic move. To manufacture concrete other raw materials besides cement are needed, namely aggregates. Aggregates are sand and gravel of different sizes, usually obtained from quarries and gravel pits in riverbeds. A vertical integration process in this case involves opening or acquiring quarries and gravel pits in sufficient number to satisfy the need of aggregates in the production of concrete. Obviously, investing in concrete

stations was also required, such as to provide the best coverage of industrial development areas and construction sites. A higher number of concrete stations owned increases the need for aggregates, which, in turn, requires good coordination between the upstream and downstream investments.

Thus, in 1998, after acquiring their first cement plant, Heidelberg Cement Group began its concrete manufacturing activity in Romania by opening two concrete stations, in Timisoara and Bucharest [3]. The development trend continued in 1999 through the opening of three new concrete stations in Bucharest, Ploiesti and Brasov. In the same year, Heidelberg brought together its concrete manufacturing plants by grouping them in a new entity, under the name of TBG Romania Beton Group. At the same time, it also created another new company, Exploatari Cariere to manage the company's existing and future quarries and pits. Both newly created companies were meant to coordinate the management activities in the Heidelberg owned concrete stations and aggregate quarries and to bring together the various acquisitions made during its short presence in the Romanian market. This was only the beginning of the vertical integration initiatives. Between 1999 – 2001 Heidelberg purchased a total of eight aggregate producing companies which, in 2002, were again grouped together under the name of SC Carpat Agregate SA. To mark clearly the affiliation to Heidelberg owned Romanian business, TBG Romania Beton Group became Carpat Beton [3] in 2003. In the same spirit, Heidelberg created in 2004 the management company Carpatcement Romania SRL, with the mission of managing the company's Romanian assets. The same year marked the merger of the three cement plants and of the newly created Carpatcement Romania SRL into Carpatcement Holding SA. All cement kinds manufactured in the three locations were henceforth produced under the trademark of CARPATCEMENT. The strategy proved successful. Carpat Agregate owns today 7 quarries and 7 gravel pits, having a total of 275 employees. Carpat Beton is a group of 18 concrete stations, a laboratory for concrete testing and a company providing concrete pumping services with 160 employees. Carpatcement Holding SA is one of the largest cement producers in Romania.

After changing its name to Holcim at the beginning of the 2000s, Holderbank Cement followed a similar strategy in the Romanian market, although without a similar marked separation between business units, in an attempt to strengthen the vertical integration process. 2010 finds Holcim Romania SA as the owner of two cement plants, Campulung and Alesd, a grinding station in Turda, 20 concrete plants and 5 aggregate pits [2].

Lafarge had a similar strategic approach. However, the way the company defined its core businesses shows several differences. Gypsum and gypsum products are, for Lafarge, part of the core business, which was not the case for the other two main players in the Romanian cement market. Also, Lafarge is represented in Romania by several economic entities organized distinctly from top to bottom, although they are linked through the company's brand policy and represent divisions of Lafarge Ciment (Romania) SA, created in 2006. The French producer has grouped the Romanian acquisitions similarly with the other two producers and has followed the same direction of the vertical integration. However, this is where the likeness stops and the differences begin. Lafarge Ciment (Romania) SA is the company's cement manufacturing unit, currently owning two cement plants at Medgidia and Hoghiz and a grinding station in Targu Jiu [1]. Concrete making and production of aggregates have not

been separated in this case, Lafarge Agregate Betoane SA owning and operating 9 quarries, 6 gravel pits and an unspecified number of concrete stations [1]. Reflecting another difference in the core business model, in 2001 Lafarge created Lafarge Arcom Gips SA as a joint venture between Lafarge Gips and Arcom SA. It was followed in 2003 by the acquisition of additional stock – 40 percent – by Lafarge [1], which increased its ownership to 90 percent. This company operates in an area not connected to cement manufacturing in any way other than supplying it with gypsum as a raw material. However, the extraction and distribution of gypsum is only a small part of the core business of Lafarge Arcom Gips, the main areas of interest being the manufacturing of gypsum boards for construction, of cold pressed metallic profiles and of a number of non-metallic mineral based products [1].

To summarize the first part, we mention that by 2006 the cement and concrete industry settled into the form we currently know, the only differences apparent today resulting from development, investment and cost saving policies or from changing market conditions. The dynamic process characterized by acquiring, grouping and branding different companies has reached by 2006 its final stage and crystallized in its final shape. We do not imply that the elapsed period was simple for the industry. The expansion of production through acquisition of additional capacity, the vertical integration characterized by opening and acquiring aggregate production facilities and concrete manufacturing plants is far from providing a complete image of a very dynamic market.

As previously stated, at the end of the 90s, the Romanian cement market was showing signs of decline, forecasts that prompted Lafarge to sell some of the newly acquired production capacity to Holcim. The beginning of the next decade reversed the trend, signs of increasing demand slowly appearing in the first years and followed by forecasts of explosive market development in the second part of the decade. Because the nine existing cement plants were evenly split between the three main players in the market, and more or less so was also the production capacity, the competition for market share and for increased profit margins was directed to different areas in this second interval.

A difficult situation confronted the three companies when market demand reached to exceed their combined production capacity, combined with excessively high production costs due to old and energy inefficient technologies. Both Lafarge and Holcim decided to scrap parts of these obsolete production lines, basically stopping and closing clinker production in Targu Jiu (Lafarge) and Turda (Holcim). However, they maintained the existing cement grinding capacities in those locations, effectively transforming them in grinding stations while investing in increased production capacities elsewhere to compensate.

Apart from investing in new concrete plants, a common approach for all three foreign investors, large amounts of capital were directed towards the cement plants. For example, Alesd was the first location where Holcim invested in technological upgrade, the more than 70 million EUR allocated to the plant turning it into one of the most modern cement production facilities in present day Romania. The second location where Holcim invested heavily was Campulung. The 120 million EUR financing resulted in a production capacity increase of over 30 percent and materialized in a completely new clinker production line that replaced the three previously operating

lines (opened in 1972). This upgrade, completed in 2008, was followed by an additional investment of 75 million EUR, directed at improving the site transport lines and the cement grinding equipment, and expanding the bulk loading facilities [2]. Another upgrade undertaken by Holcim was at the Progresul terminal in Bucharest, completed in October 2009, which increased the storage capacity by 6,000 t and the delivery capacity from 60,000 to 400,000 t/year [2]. The large investments not only increased capacities but also inadvertently resulted in a number of records. In the case of Campulung, the new pre-heater tower of the clinker kiln is the highest industrial building in Romania, reaching 137 m and the clinker storage silos are also the biggest concrete silos in the country, having a capacity of 75 000 t each [2]. Lafarge went even further, building in Medgidia the biggest dome clinker silo in the world, having a volume of 250,000 m³ for storage only, with an investment that alone exceeded 16.5 million EUR [1] and was completed late in 2009.

The race to keep up in terms of production and storage capacity is yet again only part of the picture. The old technology initially present in all locations was a problem not only in terms of production and energy efficiency but also from the point of view of environmental performance. The dust filtering units initially fitted to all production lines were electrostatic precipitators, or so called electrofilters. Electrofilters were costly to maintain and operate and very sensitive to process variations, an expensive and inefficient filtering technology. Holcim and Lafarge installed bag-filtering units, the latest and most efficient technology. Carpatcement also upgraded its main filter equipment, which contributed, in part, to the granting of Integrated Environmental Permits for Bicaz and Deva (2005) and for Fieni (2006) by the Environmental Protection Agency [3].

Holcim Romania also took the initiative of implementing standardized management systems, obtaining in 2003 TUV certifications for its newly implemented ISO 14001 environmental, ISO 9001 quality and ISO 18001 occupational health and safety management systems [2]. Carpatcement duplicated the achievement shortly thereafter, in 2005 [3]. While the Integrated Environmental Permit is a legal requirement and no cement production facility can operate without it, certification of the standardized management systems is a positive signal as it demonstrates successful application of management principles at international standards.

However, the efforts to increase profit and market share did not end there. At about the same time, in 2005, Lafarge implemented marketing decisions aimed at capturing taking customers from competition. It registered ROMCIM as its own manufactured cement and introduced it in the market in 40 kg paper bags with plastic foil insertion [1], whereas the standard cement bag size was, until then, 50 kg. The marketing campaign revolved around hinting that “With 40 kg of our product one can make as much as with 50 kg from the competition”. In the same year, Lafarge also introduced a new type of cement on the market, a very successful product branded RAPIDCEM® and characterized by increased concrete hardening speed [1]. Although the reaction to those initiatives was rather delayed, it nevertheless occurred in 2008, when Holcim also released a new product, Structo®, described as cement for every season, bagged in 40 kg bags [2] and thus challenging the competition. The cement producers had also other initiatives to gain competitive advantages. An attempt was the purchase of a branch of the Romanian National Cement Institute (Ceprocim), namely Ceprocim Engineering, by Holcim late in 2007 [4]. This allowed the Swiss manufacturer to strengthen its engineering division in Romania and in the en-

tire region, considering the forecasted evolution of the whole Eastern European market at the time.

One of the main effects of the continuous investment programs run by all three companies, combined with the overall insufficient production capacity to satisfy the continuously increasing Romanian market demand, was a constant cement price increase in the last decade. While the above mentioned reasons are rather sufficient to justify the more and more expensive cement, in the context of a healthy market economy with demand driving the supply and the availability of products, the fact was not considered as such by everyone. In 2005 the Competition Council fined all three cement producers, Holcim, Lafarge and Carpatcement, a total of 28.5 million EUR for illegal price fixing [5]. The specific fines were, for Holcim 5.5 percent of the previous year's total sales value, for Carpatcement 6 percent and for Lafarge 6.5 percent [5]. Attempting to minimize the negative impact to business resulting from the negative publicity, Lafarge and Holcim decided to pay upfront. Carpatcement however, filed a lawsuit against the Competition Council disputing the fine and the facts it was based upon. The company emerged on the winning side one year later.

Corporate social responsibility

Competitiveness in the marketplace is just the necessary condition for the development of a sustainable enterprise. When aspiring to sustainable business performance a company should consider other factors as well. The organization undertakes responsibilities that extend beyond its economic purpose and function, to protecting and developing its operating environment, social and natural, which should be able to support in return the organization for long-term prosperity. This is corporate social responsibility (CSR).

CSR is the voluntary approach by which companies interact with internal and external stakeholders to meet or exceed their needs and expectations. The practice of CSR consists in intertwining social, ethical, and environmental concerns with business objectives (such as revenue, profit, market share) and legal obligations.

The three cement manufacturers in Romania proved to be active CSR proponents. The continuous focus on reducing production costs through more efficient and innovative technologies resulted in investments made by all cement producers in the area of alternative fuels, which resulted also in a highly desirable reduction in the carbon footprint of the cement manufacturing process. In this respect, Carpatcement was the first to inaugurate in 2004 an automated line for burning alternative fuels in Deva [3]. Lafarge followed in 2007 with a 1.5 million EUR investment in shredding, storing and kiln injecting equipment for solid fuels obtained from sorted waste materials [1]. Shortly after, in 2008, Holcim publicly opened a similar alternative fuels plant in Alesd, which resulted from a common investment with Ecovalor [6], a company which specialized in waste collection and a member of the international group Eco-rec. The partnership continued with a second similar facility in Campulung, opened during 2009 [7].

By following western business models, besides answering environmental concerns the three cement manufacturers undertook other initiatives of social responsibility. In 2009 for example, the Targu Jiu grinding station reached, following the implementa-

tion and enforcement of Lafarge's Organizational Health & Safety policy, the remarkable performance of 2000 days without work related accidents [1]. In addition, as early as 2003, Lafarge entered a partnership with Habitat for Humanity Romania, later renewed in 2008, through which Lafarge sponsored with construction materials and volunteer work the building of new homes for poor people in six Romanian counties [1]. Another partnership that Lafarge is currently a member of is the foundation "Pro Patrimoni", involved in preservation and restoration projects of Romanian natural and historic monuments [1]. Finally yet importantly, in a partnership with the "Ion Mincu" Architecture University and "Anghel Saligny" Construction School in Bucharest, Lafarge helps students acquire knowledge about the economic and industrial environment, and facilitates access to architectural solutions using modern building materials [1]. A public recognition of the company's efforts was made in April 2005 when the Ministry of Culture presented Lafarge with a Merit Diploma for involvement in restoration projects of the natural and historic heritage [1].

The French cement producer is not alone in the field of CSR. In the last four years, Holcim has invested 1.6 million EUR in training programs for their employees, because of which a good number of them succeeded in international careers [2]. In terms of environmental protection, besides having invested in the latest technology for filtering equipment and having all 20 concrete stations labeled as ecological, i.e. producing zero waste, the company has also invested in pollution reduction technologies, for example in the reduction of nitrogen oxide emissions from the cement kilns [2]. Involvement in the community culminated with establishing a two-year training program authorized by the Romanian Government and targeting high school graduates. Titled "Technicians for the Cement Industry" the program offers graduates the possibility to take up jobs with Holcim (2).

Beginning in 2004, Holcim Romania SA started publishing Sustainability Reports, following the reporting principles of the Global Reporting Initiative [2]. Similarly, Carpatcement Holding launched in 2006 its website www.carpatcementcsr.ro, to be used as an on-line platform for communicating the company's CSR policy and initiatives [3]. In 2008 Carpatcement Holding entered a partnership with a very active website www.responsabilitatesociala.ro, whose main goal is to encourage Romanian companies to invest in the development of the communities in which they operate and of the society at large [3]. Among the most notable achievements is the social responsibility program "Bucureștiul respiră", a partnership between Carpatcement, the Association of Environmental Experts, and the Ilfov and Regional Environmental Protection Agency Bucharest. The main goal of this program was to plant tree curtains for protecting the capital city and to rehabilitate polluted areas in its vicinity. In 2007, during the PR Gala in Bucharest, Carpatcement was offered the Silver Award for the efforts made during this project [3].

Despite the booming development during the last 10 years, the current economic crisis altered market conditions, significantly affecting the short to medium term development prospects of all industries, including the cement industry, which is yet to benefit from its sustainability directed pathway. It is our belief, however, that all of the above considerations demonstrate the dynamic character of the Romanian cement industry and the benefits it derived from the strong connections it maintains with western management principles and practices.

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Innovation Activity of the Hungarian SMS Sector: Lessons and Criticism

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Abstract

Purpose – In my paper I will analyze the indicators of the low level of activity and performance in R&D and innovation, especially in SME sector

Methodology: – Datas of the OECD and Hungarian official resources are analyzed; SWOT analysis.

Findings – Hungary exhibits some features of a „dual economy”. On one hand, it has large, often foreign-owned companies, which are well integrated in international production, distribution, and, in some cases, R&D and innovation networks, but not always well connected to the rest of the Hungarian innovation system. On the other, there is a large sector of domestic firms, notably SME-s, characterised by low productivity and insufficient innovation capabilities, which typically operate in local markets with relatively unsophisticated demand.

Research limitations/implications – Official and statistical data are analyzed, qualitative research methods are not used.

Practical implications – Useful information and finding for the SME sector and how to improve they innovation activity

Originality/value – Analyzing the current situation from a specific point of view.

Key words: R+D, innovation, SME sector

Introduction: an increased role for innovation in Hungary

Over the past two decades, Hungary has made very significant progress in building a market-oriented, competitive economy which is fully integrated into the European Union (EU) and the world economy at large. In the process of EU enlargement, Hungary has moved closer to the core of the European market. New specialisation patterns have emerged, as reflected by the fastgrowing exports of manufactured goods, and their shift towards higher skills and quality. Investment by multinational enterprises (MNEs) that have located production plants in Hungary has been a key factor in the restructuring of the productive sector towards more technologically advanced activities.

Hungary has made remarkable progress in a relatively short time. Over the past two decades the Hungarian economy has been transformed into a functioning market economy and the institutional framework for sustaining it has been established. The process of European integration – culminating in Hungary’s accession to the European Union – has strengthened the institutional framework. In fact, Hungary scores satisfactorily among OECD countries on a number of basic institutional indicators (OECD, 2008a). The economy has also become tightly integrated in the global economy. For example, according to the KOF Index of Globalisation (Dreher *et al.*, 2008) – which provides a synthetic measure of economic, social and political globalisation – Hungary is among the world’s 15 most globalised countries and ranks as high as eighth in the economic dimension of globalisation. Hungary has committed to join the euro area.

Hungary’s GDP per capita is still around 60% of the EU level. (KSH, 2009) This gap mainly reflects lagging labour productivity, while lower labour utilisation accounts for the much smaller remaining difference. In addition, the performance of comparable

neighbouring countries indicates that Hungary does not fully realise its economic potential, owing to unstable macroeconomic conditions and structural factors.

Some forms of innovation have played an important role in explaining the robust growth of total factor productivity since the 1990s; these include the adoption of market institutions and related firm-level organisational change, as well as the importation, through foreign direct investment (FDI), of best production and marketing practices. However, at this stage, Hungary's ability to base a further rise in productivity on a new generation of sustained innovations appears limited, as its innovation performance is generally judged to have remained well below its potential. Many of the standard innovation performance indicators confirm that the overall level of innovation activity is low and innovation based on research and development (R&D) even weaker. Hungary exhibits some features of a "dual economy". On the one hand, it has large, often foreign-owned companies, which are well integrated in international production, distribution and, in some cases, R&D and innovation networks, but not always well connected to the rest of the Hungarian innovation system. On the other, there is a large sector of domestic firms, notably small and medium-sized enterprises (SMEs) characterised by low productivity and insufficient innovation capabilities, which typically operate in local markets with relatively unsophisticated demand. In spite of some encouraging developments (e.g. the emergence of sophisticated suppliers in the automotive industry and of some dynamic research based firms), the quasi-absence of highly innovative medium-sized enterprises leaves a glaring gap. (Havas – Nyíri, 2007)

Problems of the Hungarian innovation system

Low level of innovative activity

In spite of the robust growth in TFP, the overall level of innovation activity as measured by most standard indicators of innovation input, output and even technology diffusion (such as ICT-related indicators) has remained comparatively low in the economy at large. The weakness in recorded innovation activity seems to be at least partly due to the fact that much of the observed innovation activity and research and development (R&D) in particular are concentrated in some large, export oriented, often foreign-owned enterprises, operating in a limited number of manufacturing industries, and - to a lesser extent - in some parts of the services sector. In contrast, a vast number of small and medium-sized enterprises (SMEs) record no or only feeble innovation activity. What seems to be lacking is a strong segment of the medium-sized innovation-oriented firms which play an important role in many of the more innovative OECD countries. Moreover, relatively little innovation activity is based on domestic R&D and technology development (Havas, 2006). While the structure of production has already converged to that of more advanced economies, thus limiting future re-allocation effects, the (former) transition economies can still realise additional gains from adopting new technologies and methods of production and from investment in infrastructure, improved regulations and institutions, and law enforcement. In order to maintain and foster the dynamism of TFP growth, more attention needs to be paid to the innovative performance of Hungarian businesses. While the current economic situation puts fiscal stabilisation at the top of the policy agenda and, beyond the short term, calls for maintaining sound macroeconomic

policy and forging ahead with structural reform, fostering innovation is necessary to achieve sustainable growth in the long term. In this context, the provision of framework conditions and more dedicated innovation policy will have a major role to play. (Egyed et al, 2007)

Distribution by firm size

The size distribution of a country's population of business firms is important for several reasons. Among others, a firm's size is related to its capabilities, not least in the area of R&D and innovation; it also influences the role it plays in the regional or national innovation system, and it gives rise to specific requirements for facilitating its operations.

In the former centrally planned economy the size distribution of firms was heavily based towards large companies. The transition towards a market economy has brought about a fundamental change. Today, 96% of SMEs operating in Hungary are micro-enterprises with fewer than 10 employees, a higher proportion than in most OECD countries, with 75.6% in the 0-1 size class (Table 1.). The large share of small firms might suggest a high degree of entrepreneurship or innovativeness. However, innovation survey data indicate that the share of innovative SMEs – especially among small firms – is rather low by international standards, and far below the share of innovative large firms. SMEs are concentrated in low-productivity industries such as the craft and retail sectors, with limited presence in manufacturing, especially in more advanced industries. Entrepreneurial capacity is limited, human resources are often unskilled, and the level of innovative activity is low. Most of the micro and small businesses are undercapitalised; risk taking ability is weak. Across size classes, performance indicators of Hungarian SMEs tend to be low compared to the EU average, regardless of the size class. Notably, value added per employee – a measure of productivity – is comparatively low in all size categories.

Entrepreneurship and administrative burden

Survey results suggest that the share of genuine entrepreneurial businesses is rather small in Hungary. The most important motivation to set up a business is the difficulty of obtaining employment, and among the motives for establishing self-employed status, "a business opportunity" only ranks third (KSH, 2006b). A further sign of weakening entrepreneurial drive is the decrease from 13% in 2001 to 9% in 2005 in enterprise creation. The number of new enterprises (which represent genuinely new capacity) decreased by 24% during the same period. The decline has been even more pronounced in manufacturing, which suffered a setback of 45%. The birth/death ratio decreased from 1.2 (2001) to 0.9 (2004) and among medium-sized firms the death/birth ratio increased from 3 to 6.2 (KSH, 2007b). The single most important factor impeding firms' operations identified by entrepreneurs is the high tax and social security burden. The second main obstacle to the operation of SMEs is the volatility and unpredictability of economic regulation, which is mostly of domestic origin (MoET, 2007). Overall, the World Bank's *Doing Business* ranks Hungary 45th out of 178 countries in terms of "ease of doing business", and 7th in eastern Europe and central Asia (EECA). The World Bank also identifies "starting a business" and

“dealing with licences” as a serious obstacle to SME formation. Hungary ranks 67th and 87th respectively in the global comparison and 14th and 10th for the EECA region. Reforms aim to improve this situation: the number of days required to start a business is targeted to decrease from 38 in 2007 to 16 in 2008. Closing a business is also unsatisfactory (Hungary’s global rankings are 53rd and seventh, respectively). Current bankruptcy procedures have several drawbacks; in particular, they do not facilitate business rehabilitation, particularly for small enterprises (OECD, 2008a).

An indicator-based international comparison covering nine sectors shows that Hungary’s level of regulatory restrictiveness on FDI is at the OECD average (Koyama and Golub, 2006).

In summary, Hungary’s accession to the EU has accelerated the adoption of a modern set of framework conditions in key areas (e.g. competition policy and IPRs). As a consequence, framework conditions for innovation have improved. In some sensitive areas – such as the macroeconomic framework and the administrative burden on enterprises at various stages of their operations – there is considerable room for improvement.

Inputs to innovation

The leading OECD economies tend to spend significant resources on R&D. In Hungary, however, gross domestic expenditure on R&D (GERD) is low by international standards despite substantial increases in R&D spending, which roughly doubled in nominal terms between 1998 and 2005. Following the restructuring and far-reaching reform of the Hungarian research and innovation system during the transition period, R&D intensity (the ratio of GERD to GDP) reached a low in the second half of the 1990s, fluctuating around 0.7%, but has since moved up to around 1% of GDP (2006). Hungary thus has an intermediate position among the eastern European catching-up economies between Slovenia and the Czech Republic, on the one hand, and Poland, the Slovak Republic and Romania, on the other. However, all lag far behind the OECD and EU averages.

Business enterprise expenditure on R&D (BERD), *i.e.* R&D performed in the business sector, has increased significantly since 2004 to account for 0.48% of GDP in 2006. The share of micro- and small enterprises in BERD has increased (from 8.4% in 2000 to 14.8% in 2006). Medium-sized enterprises recorded the strongest decline in share (from 21.3% in 2000 to 12.3% in 2006).

However, since 2004, the shares of micro, small and medium-sized enterprises have all picked up. This may be partly due to the establishment of the Fund for Research and Technological Innovation (2004) which supports business R&D and innovation, with a number of instruments aimed specifically at SMEs (Table 2.).

R&D spending

Although it has a substantial share of high-technology industries, the Hungarian economy is characterised by low overall levels of business enterprise expenditure on R&D (BERD stood at 0.48% of GDP in 2006). As Table 3. shows, large enterprises accounted for around 70% of BERD while medium-sized enterprises show relatively weak levels of activity. More recently, micro-enterprises and small and medium-sized enterprises (SMEs) seem to have gained a larger share of R&D. The number of business R&D units has risen significantly, from 258 in 1998 to 1 027 in 2006, with the main source of growth in the micro and small enterprise sector, which had just 256 units in 2000 (53.6% of the total), but 667 in 2006 (64.9% of the total). At the same time, however, the average size of these units (fulltime equivalent [FTE] researchers per unit) declined from 31.0 in 1991 to 6.1 in 2006. This compares to an average of some 25 FTE researchers for public R&D institutes. Given that a handful of enterprises, especially in the pharmaceutical industry, operate rather large facilities, many R&D units in a number of sectors may be below critical mass. The chemical industry (mainly related to pharmaceuticals) accounted for around 60% of total R&D spending by manufacturing companies in 2006; this means that five or six large companies account for 35-40% of total Hungarian BERD.

A large sector of domestic SMEs characterised by low innovation capabilities and typically operating in local markets. A positive sign is the emergence of more sophisticated suppliers in certain areas of economic activity (e.g. in the automotive cluster) as well as an (albeit very limited) number of highly innovative, research-based firms.

Interactions in the Hungarian context

Interaction between enterprises and academia therefore seems to be quite substantial in monetary terms. However, other data paint a less rosy picture. For instance, innovation surveys clearly show that the overall share of enterprises collaborating on innovation is substantially lower in Hungary than in many other countries, including other central and eastern European countries such as the Czech Republic, Poland and the Slovak Republic. Especially among SMEs, collaboration on innovation is rather rare. Furthermore, collaboration with national partners is much less pronounced on average in Hungary than in the EU27, while cooperation with suppliers in Europe is almost at the EU average, a sign of good links between large multinational manufacturers and their suppliers in other parts of Europe but significantly weaker links with national entities. The data thus seem to reinforce notions of a dual economy composed of MNEs and Hungarian SMEs and to indicate limited success in linking the innovation activities of MNEs to domestic and regional innovation systems. In the long term, the high share of funding of business R&D from abroad is likely to be sustained only if R&D-intensive enterprises are more tightly linked to Hungarian research institutes and other businesses. Increasingly global sourcing of R&D facilities may also threaten Hungarian sites.

The Innocsekk programme takes a regional approach to innovation by SMEs. It allows companies – through a voucher – to acquire the business, innovation and R&D services needed for their innovation processes. It supports innovative activities

of micro and small enterprises, by promoting the use (and thus the demand for) innovation-related services. The voucher entitles them to a variety of innovation-related services relating to R&D, incubation, technological prototyping, measurement and quality control, project management, innovation marketing and intellectual property rights, purchase of licences, and technology transfer. Applications are submitted to the RIÜs which operate as local points of expertise and help enterprises with the tendering. Final funding decisions are made by NKTH three or four times a year.

The first three years of the programme's operation show that it was able to reach many SMEs that had not previously applied for support from the Innovation Fund. By mapping innovation actors in the region, the programme also helped to identify R&D providers, bridging institutions, and consultants able to provide effective services. (Figure 1.)

SWOT analysis – strengths and weaknesses of the hungarian innovation system

Hungary's history, geo-political situation, and cultural and institutional characteristics show some specific features which have to be taken into account in an assessment of the current state of its innovation system and in determining the feasibility of policy responses to new challenges and opportunities:

- Hungary has had a rich and at times difficult history, with phases of remarkable success and outbursts of creativity and entrepreneurship. In the recent past, it has re-invented itself as a market economy managed by democratic institutions.
- It is a small open economy with a population of slightly more than 10 million which needs to find an adaptive mode of specialisation to take advantage of the evolution of European and world markets.
- It has a relatively high level of political centralisation. It has a strong and thriving capital region around Budapest (central Hungary), and comparatively high levels of regional disparities, with some mismatch between the location of knowledge institutions and of industrial facilities.
- It has had difficulties in reconciling the political changes required for democracy with the need to secure the minimum degree of continuity necessary for forward-looking, efficient management of the economy. Science, technology and innovation policy is one of the areas in which evidence-based policy making can generate the consensus needed to safeguard long-term strategic investments from short-term policy turbulence.
- Hungary has a long tradition of excellence in science and has produced, notably in the 20th century, many world-class scientists who have made significant contributions to extending the world knowledge frontier in a number of areas. This has contributed to the social prestige of science and technology, but nevertheless additional government efforts are needed to mobilise the scientific community for economic goals.

Main strengths

The main strengths of the Hungarian innovation system include:

- *The legacy of strong and sustained growth of output and productivity.*
- The overall efficiency of the economy has increased significantly over the last 15 years.
- *A high degree of openness of the economy.* Within a relatively short time, Hungary has become one of the world's most "internationalised" economies and has attracted a sizeable volume of FDI.
- *Improved framework conditions for innovation.* Institutions and framework conditions have evolved rapidly and in many respects now appear to be conducive to innovation. Competition policies, for example, have been adapted to comply with EU standards and made more rigorous. Yet efforts need to be continued to provide framework conditions that increase the incentives for firms to respond to market pressure through innovation, keeping in mind that good framework conditions are necessary but not always sufficient for strong innovation performance.
- *Good quality of research output in some areas.* Hungarian science shows comparatively good overall performance and strong results in some areas of fundamental or more applied research such as physics, mathematics, biology, chemistry, clinical medicine and engineering.
- *Comparatively high "research productivity".* Publication output per researcher and quality of publications (measured by citation-related indicators) are closer to the EU average than the level of funding might suggest.
- *A solid legal basis for science, technology and innovation (STI) policy.* Hungary's STI policy today rests on a solid legal basis (laws on innovation, the innovation fund, higher education, etc.).
- Most other major institutions of an advanced innovation policy system have also been put in place at least formally, e.g. high-level policy co-ordination and advisory bodies.
- *Existence of a differentiated portfolio of funding schemes* for applied and basic research, managed by specialised funding institutions such as the Office for Research and Technology (NKTH) and the Hungarian Scientific Research Fund (OTKA).
- *Political acknowledgement of the importance of fostering science, technology and innovation.* Fostering innovation has been declared a priority by the Hungarian government in major policy documents (the New National Development Plan, the Mid-term STI Strategy and the Economic Development Operational Plan – EDOP).

Main weaknesses

The main weaknesses of the Hungarian innovation system include:

- *Low level of activity and performance in R&D and innovation, especially in SMEs,* as reflected in many indicators.
- *Low level of R&D intensity, an even lower level of business R&D spending and weak patent activity.* Moreover, R&D is heavily concentrated in relatively few large firms under foreign ownership, operating in a narrow range of industries.

This implies poor capacity to sustain competition in research based industries and limits spillovers as well as the capacity of the economy to absorb knowledge from abroad.

- *High regional concentration of R&D activity.* R&D is heavily concentrated in central Hungary. This also holds true for science, technology and innovation governance capabilities.
- *Relatively low non-R&D investment in innovation by international standards* (such as expenditure on machinery, equipment, licences and know-how for the introduction of newproducts and processes) although its share in total innovation expenditure is rather high.
- *Lack of a strong segment of innovative SMEs.* Much of the SME sector records low productivity, lacks entrepreneurial and innovative capabilities, is oriented towards local markets and is insufficiently integrated in global value chains. Hungarian enterprises show a significantly lower propensity to innovate than businesses in most EU member countries.
- *Lack of mobility and co-operation between actors.* The level of cooperation between enterprises and of industry-science relationships, including the mobility of personnel between academia and industry, appears to be low.
- *Slow adaptation of public research organisations, including universities and the Academy of Sciences, to the requirements of a knowledgebased economy.* Only recently have these institutions undergone the profound changes (e.g. in steering and funding) that were implemented earlier in most other OECD countries.

Threats and opportunities

Major ***threats*** to Hungary's future development include:

- *A loss of dynamism with a marginalisation of Hungary as a location for internationally mobile investment and innovation.*
- *Failure to adapt to increasingly innovation-driven competition*, in particular from emerging economies, and to exploit new opportunities in the global economy.
- *Drying up of the pipeline for human resources for science and technology (HRST)*, in a context of growing global "competition for talent".

There are also very significant ***opportunities*** to be seized:

- *Achieving a high-performing and adaptive innovation system* so as to move towards a more knowledge-based economy.
- *Realising the potential of Hungary's public research organisations* and increasing their contribution to the overall performance of the national innovation system.
- *Making the best use of the substantial EU funds* available for the new planning period (2007-13).
- *Maximising the national benefits for innovation, economic growth and social welfare from the globalisation of R&D through accelerated development of international linkages.*

Sme's innovation capabilities

The share of innovative enterprises is small in Hungary, and innovation plays only a minor role in business success for the large majority of firms, and the share of innovative firms is much higher among the large firms than among SMEs.

The low overall level of innovation activities of firms is a serious challenge, especially in the indigenous SME category. Several EIS indicators, such as SMEs innovating in-house, innovation expenditures, sales of new-to-market and new-to-firm products, the share of early stage venture capital in GDP and SMEs using organisational innovation reflect the difficulties. Hungarian SMEs are close to the lower end of the EU27 by both in-house and organisational innovation activities.

Firms' innovation capabilities in Hungary are strongly determined by the fact that 59% of them considered the lack of demand for new products as the reason for a passive innovation attitude. Creating new markets via innovation is usually not part of SMEs' strategies. The low or missing market pressure may contribute to a negative feedback on the innovation capabilities of companies. In some cases excessive competition might hinder assuming risks involved in investing in innovation. The lack of resources (both internal and external) and the high cost of innovation were the two reasons most frequently mentioned as bottlenecks (similarly to their counterparts in other European countries).

Based on the number of employees the Hungarian medium-size firms are comparable with those in the EU. Concerning their output (net revenues) Hungarian medium-sized firms on average are lagging behind the range of net revenues set by the Eurostat and applied to the classification of the size groups of businesses. Accordingly, Hungarian medium-sized firms (with some exceptions, of course) belong to the small firm categories rather than to the former size category in the EU.

Recommendations

Fostering innovation in the business sector

The comparatively low level of business sector innovative activity, including R&D, is a key weakness of the Hungarian innovation system. Hungarian STI policy has therefore been right to identify increasing the level of R&D and innovation activities among Hungarian enterprises, especially SMEs, as a priority task in major recent policy and strategy documents. In addition to improved framework conditions, achieving this goal requires financial support for R&D and innovation in enterprises to correct for market failures that lead to underinvestment in R&D and innovation in business firms.

The population of firms covers a wide spectrum, and Hungarian firms are more varied than firms elsewhere. There is a large segment of inward-looking SMEs characterised by low productivity and innovation capabilities, a promising but still small group of technology-based start-ups, subsidiaries of highly productive, primarily foreign-owned MNEs with sizable R&D activity within and outside Hungary, as well as many enterprises that fall outside these categories. Evidently, the needs of these firms vary enormously. Innovation policy needs to take full account of these

differences through a differentiated set of support instruments and measures. STI policy must be broad-based, and not just reduced to R&D, while at the same time the R&D core of innovation should not be neglected.

Hungarian STI policy has been right to place special emphasis on support of the SME sector. As shown in this report, many public support instruments target SMEs, such as measures to facilitate the diffusion of new technologies, especially ICT, which is known to play an important role in boosting productivity growth. Despite considerable efforts, e.g. international openness and the liberalisation of the telecommunications industry, policy has not yet succeeded in sufficiently closing the gap in the uptake of ICT with more advanced countries.

Despite Hungary's considerable efforts, much remains to be done to foster innovative and complementary (management, marketing, etc.) capabilities of SMEs, to strengthen their ability to absorb knowledge and technology, and to link them with innovative networks. Collaboration between business enterprises and between enterprises and public research organisations, including in regional clusters, has received much policy attention in recent times. However, as this report shows, much needs to be done to make these co-operative arrangements work effectively. The expansion of schemes to promote innovation increases the need for good design and the need to safeguard against opportunistic behaviour by beneficiaries of these measures. Some aspects and trade-offs have yet to be taken sufficiently into account. For examples, excessive support for SMEs (or certain types of SMEs) may actually discourage their growth. This is an important issue as Hungary lacks a strong segment of medium-sized innovative firms. Furthermore, an area that may not have received the policy attention it requires is innovation in services – an area that has become increasingly important in all OECD member countries.

As in other countries, policy typically addresses one by one the problems identified in the innovation system. New measures have been introduced while existing ones have remained in place. As a result, the portfolio of instruments is not optimal, and it deviates even more from an optimal state as new instruments interact with existing ones and the environment changes. For example, the impact of tax incentives for R&D can be expected to change with general changes in the tax regime, the treatment of certain sub-groups of firms (e.g. phasing out of tax holidays for FDI ventures of MNEs) or the introduction of new direct support instruments.

Strengthening the links in the innovation system

The levels of R&D performed by both higher education institutions and public research organisations funded by business enterprises compares favourably to the situation in other OECD countries. However, this is not necessarily indicative of strong industry-public sector research linkages, since it may be in part induced by the innovation contribution, the levy introduced to fund the Research and Technological Innovation Fund. Indeed, complementary evidence suggests the opposite to be the case, with innovation links between firms and other national actors weak when compared to the EU average. While there are notable links between *innovative* firms – whether home-grown technology-based SMEs or subsidiaries of MNEs – and the public research base, particularly universities, the issue for Hungary is that such firms

are not very numerous and tend to concentrate in a few regions. In addition, these do not necessarily align with the regional distribution of public research organisations across Hungary, particularly in the case of West Transdanubia. The vast majority of Hungarian enterprises (especially SMEs) typically tend to have little capacity to absorb knowledge emanating from the public sector research base. Accordingly, PROs have yet to become the innovation centres of their regions, although this also reflects in part their own slow adaptation to the requirements of a knowledge-based economy.

Since the mid-1990s the government has been addressing these weaknesses, and a considerable number of measures (notably direct support measures) have been established to facilitate and promote collaboration and networking, notably between industry and academia. Prominent among these is the Co-operative Research Centres scheme, which was recently favourably evaluated and is set to continue. A further recently launched major initiative, the Regional Knowledge Centres programme, has similar objectives, highlighting the need for some streamlining between initiatives. The number of centres to be supported under this scheme also appears quite large for such a small research system. By contrast, the new funding strategy of NKTH envisages a much more focused approach to funding the centres, and will provide larger amounts of support to a much-reduced number of National Research Centres. At the same time, cluster-based policies have been adopted. While these have the potential to better embed MNEs into the various regional innovation systems, the integration of indigenous SMEs into these clusters is generally rather weak. Here, the volume and intensity of co-operation and the efficiency of cluster management need to be improved. While the establishment of the National Technology Platforms is not a cluster-based programme in a strict sense, it could provide a basis for articulation of Hungarian innovation policy with European policy.

STI policy makers need to be aware of the risk that the various schemes promoting clusters, networks and collaboration may send confusing, even conflicting signals to actors. The establishment of well-functioning governance and communication structures between the various initiatives seems a daunting, yet important, task for the governance of innovation policy.

Overall, and apart from the difficulties highlighted above, Hungarian innovation policy has rightly embarked upon approaches for strengthening linkages at the national and the regional levels, which are broader in scope than a mere focus on industry-science R&D collaboration. The question, as in other areas of innovation policy, is again one of implementation and the establishment of sound, transparent and stable institutional frameworks for cluster development and industry-science relations.

Promoting innovation in the business sector

Increasing the level of R&D and innovation activities in Hungarian enterprises, especially SMEs, has been rightly identified as a priority task of innovation policy in various policy documents (notably the current action plan). In addition to the improvement of framework conditions (see above), this requires continuing financial

support for R&D and innovation in enterprises to correct market failures that lead to underinvestment by the private sector.

This kind of support to enterprises has increased in the past years, especially since the launch of the Research and Technological Innovation Fund in 2004; but it may still be insufficient to induce the growth in business R&D that is necessary to achieve a target of total R&D intensity of 1.8%. Hungary will have the opportunity to leverage national resources devoted to support for R&D and innovation owing to new funds made available by the EU, notably Structural Funds, which may be of the same order of magnitude as national funding (approximately EUR 200 million). In addition, Hungarian researchers will continue to be successful in attracting funds from the European Framework Programmes. In this area, it is necessary to:

- *Ensure that EU funding does not crowd out national funding.* Given the needs of the Hungarian business sector and the importance of customising support measures accordingly, it is important to fully seize this new opportunity, while avoiding the risk of external funding substituting for national funding. Maintaining the level of national budgetary effort for R&D and innovation will only be justified if all the conditions for efficient use of such funding are met.
- *Put more emphasis on measures to reinforce the innovation capabilities of SMEs,* taking into account their specific and varied needs.
- *Place strong emphasis on stimulating SMEs to innovate and to collaborate* with other enterprises and with public research institutions (e.g. in regional clusters).
- *Ensure that measures to support R&D and innovation do not discriminate de facto against innovative start-ups.*
- *Consider additional measures to encourage R&D and innovation in the services sector.*
- *Facilitate the diffusion of new technologies,* including ICT, which will continue to play a key role in boosting productivity growth. The most powerful means of achieving rapid uptake of technologies are good framework conditions – international openness, competitive markets and innovation-friendly regulation – but more specific tools can also be used. A combination of specific incentives and customised services is needed. Their delivery would involve the mobilisation of actors such as government support agencies, business associations and public research organisations. The regional dimension of technology diffusion processes should be stressed.

Strengthening the links in the innovation system

The Hungarian government recognises that weak connectivity within the innovation system is limiting its performance. Since the mid-1990s measures have been adopted to strengthen collaboration and networking, notably between industry and academia. Since the late 1990s, cluster-oriented policies have been evolving as a tool of innovation policy. The government should intensify its efforts along these lines while drawing lessons from experience in improving some of the instruments used to promote collaborative innovation.

- *Foster stronger ties between foreign-owned companies and local suppliers or customers and research institutions* and encourage links between Hungarian companies and foreign (and Hungarian) research organisations. There is a

case for supporting the attraction and maintenance of MNEs' R&D units in order to provide opportunities for learning in both industry and the academic sector.

- *Ensure that the programmes aimed at fostering industry-science relations (ISR) correspond to the real needs of industry.* In current practice, many, if not most, of the research topics and output of ISR oriented projects are university-initiated and university-driven. This may be – at least partly – a reflection of distorted incentives in current funding schemes, including some aspects of the design of the innovation levy.
- Strengthen the basis for improved industry-science links through additional measures that strengthen the absorptive capacity of business firms, especially SMEs. The government should consider whether the voucher scheme Innocsekk could be better used for this purpose.
- *Assess the effectiveness of technology transfer organisations* at universities against international good practice.

Summary and conclusions

The Hungarian NIS has gone through a significant transition process since the early 1990s. Rapid and widespread privatisation processes resulted in genuine owners. The expansion of business R&D, both in terms of total expenditures and the number business R&D units, indicates a stronger base relying on which innovation capabilities can be improved, albeit from a low level. But the low share of innovative firms and the huge difference between the foreign-owned and indigenous firms' innovation activities highlight major challenges of the NIS. These figures suggest that Hungary continues to suffer from a dual economy syndrome: it is composed of highly productive and technologically intensive foreign-owned large firms, and fragile, financially and technologically weak indigenous SMEs. The decreasing weight of medium-size enterprises compared to 2000 is a particularly worrisome phenomenon.

The Hungarian national innovation system is challenged by the pressing need that the country should move from the dominance of low cost economic activities towards an innovation-driven economy. Several weaknesses of the current NIS inhibit this fundamental strategic move: low demand for innovation and R&D, slow diffusion of innovations, poor co-operation capabilities, and ineffective governance.

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Table 1. Comparison of enterprises in the European Union (EU19)¹ (2003) and Hungary (2007) average

		Micro	Small	Medium	SMEs	Large	Total
Average size (persons)	EU19	3	19	98	5	1 052	7
	HU	2	20	100	3	874	4
Sales revenues per enterprise (EUR thousands)	EU19	440	3 610	25 680	890	319 020	1 550
	HU	73	1 689	8 083	183	95 952	293
Value added/enterprise (EUR thousands)	EU19	120	1 180	8 860	280	126 030	540
	HU	12	226	1 359	28	21 244	52
Proportion of export in sales revenues (%)	EU19	9	13	17	12	23	17
	HU	11	12	18	13	41	23
Value added per employee (EUR 1 000/person)	EU19	40	60	90	55	120	75
	HU	7	11	14	9	24	13
Labour cost per value added (%)	EU19	57	57	55	56	47	52
	HU	41	63	74	58	56	57

¹ EU19: EU15 plus Iceland, Liechtenstein, Norway and Switzerland.
Source: OECD (2008)

Table 2. Composition of BERD by size of firms (%)

	2000	2001	2002	2003	2004	2005	2006
Micro-enterprises (0-9)	3.0	3.1	5.3	5.2	3.3	3.7	5.1
Small enterprises (10-49)	5.4	4.9	6.9	6.7	6.9	7.1	9.7
Medium-sized enterprises (50-249)	21.3	22.4	12.2	9.6	7.9	8.6	12.3
Large enterprises (250 or more)	70.3	69.6	75.6	78.5	81.9	80.4	72.4
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: KSH, Research and Development, 2006.

Table 3. Distribution of business R&D activities by size of firms, 2000 and 2006 (%)

Firm size (employees)	2000				2006			
	Number of research units	R&D personnel (FTE)	of which researchers	R&D expenditure	Number of research units	R&D personnel (FTE)	of which researchers	R&D expenditure
Micro (0-9)	33.7	7.1	8.1	3.1	43.1	12	12.3	5.1
Small (10-49)	19.9	10	9.5	5.4	21.8	16.6	15.3	9.7
Medium (50-249)	21.1	27.7	28	21.1	17.6	19.3	18.6	12.3
Large (> 250)	25.3	55.2	54.4	70.3	14	51.5	53.2	72.4

Source: KSH, Research and Development (various years).

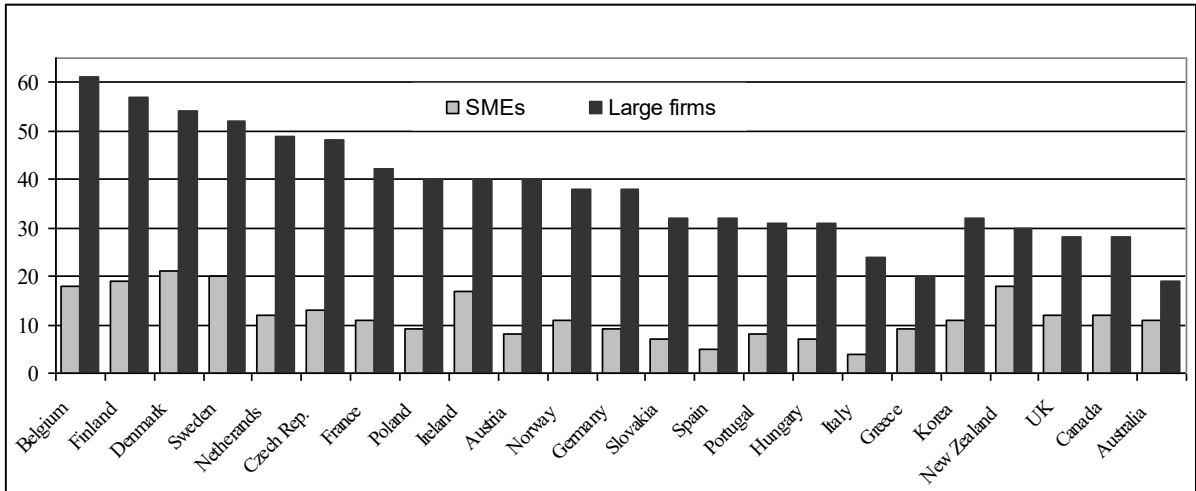


Figure 1. Firms collaborating in innovation activities, by size, 2006-08

As a percentage of all firms

Source: OECD Science, Technology and Industry Scoreboard 2007.

The Driving Forces of Micro-Level Growth and the Growth Willingness of Companies

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Abstract

Purpose – Among today's challenges, it is not an easy task for a company to advance along a growth path. Therefore it is important to map the key factors and motivations that serve reaching this objective best.

Methodology/approach - companies' retained profits may also be indicative of growth willingness.

Since companies' willingness to grow may be reflected by that owners retain their profits and by doing so express that it is important for them to realise growth from this internal source. In order to justify this, I have analysed the data of processing companies in Zala County (Hungary).

Findings – Based on the high rate of companies retaining the total of their profits, we may deduce that the owners of the enterprises prefer retaining their profits after taxation and using the same to finance the future operation and expansion of the respective company. This is further supported by the fact that the average profit retention rates of these companies ranged between 89 percent and 93 percent in the surveyed years.

Research limitations/implications- we can state that in the case of ZALA200 enterprises, growth willingness based on shareholder motivation could be observed, since a high percentage of profitable companies retained their profits. We must also add, however, that development may be achieved not only with the help of internal but also external sources.

Practical implications – In order to analyse growth, it is indispensable to map the driving forces that (may) move the company towards growth.

Key words: corporate growth, growth willingness.

The importance of analysing corporate growth is unquestionable even in a period aggravated by crises. Trusting that the world economy does soon recover from its currently unfavourable situation, we must get prepared and facilitate the materialization of growth as soon as possible both on the macro- and microeconomic levels.

Considering that it is actually the expanding performance of the corporate sector that supports macro-level growth, the relevance of micro-level growth research may not be questioned. It can be justified by the fact that GDP, which describes macro-level growth numerically, will increase in real value if the corporate sphere produces more and also realises (sells) the products made. The research of corporate growth is also important because in economic analyses the examination of macroeconomic growth is more frequent than that of micro-level growth.

In the following, I shortly describe the environmental changes that have influenced the elbow room of corporations in Central and Eastern European countries for the last twenty years. Then the reader will be acquainted with the variegation of corporate growth terminology. I then attempt to map the driving forces that (may) drive companies towards growth. I put special emphasis on the role and motivation of owners and managers. Finally, I present my ideas about companies' growth willingness and this will furthermore be complemented with empirical research.

At the beginning of the 1990s in Hungary, similarly to other Central-Eastern European countries, profound changes took place in the life and environment of corporations. The evolution of the conditions of market economy, the spread of new company and organisational forms, the fundamental change in ownership relations have all brought about a restructuring in corporate objectives, operations and

finances, etc. Changes have also occurred in terms of corporate performance and growth. Strengthening ownership increasingly expects companies to operate with success in the longer run and this expectation is impossible to satisfy without a sustainable competitive edge. In order to realise growth, corporations need constantly to look out for changes in their environment and prepare for these changes in due course. The capital abundance of multinational companies, the transformation of the role of human resources, the exploitation of natural resources by corporate giants, etc. set new challenges for corporations to face (based on Hoványi; 1995. pp. 955-970) and they also have a bearing on achieving corporate growth.

Today, at the beginning of the 21st century, several new features characterize the corporate environment, therefore realising growth is not an easy task for today's corporations. If a company does grow, it reflects the efficiency of its past operations too, while this growth is also the basis of future success. We can only speak about corporate growth if a company grows at least as rapidly as or faster than the market it operates in.

In order to analyse growth, it is indispensable to map the driving forces that (may) move the Company towards growth. What makes the achievement of corporate growth important? Let us list some 'reasons'. Through growth the company's capital strength, debt capacity and creditworthiness may improve. As a result of expanding turnover, cash flows will strengthen too, which is then followed by improving liquidity. The greater wealth resulting from growth opens up the opportunity for horizontal and vertical diversification by which the risk of corporate operations can be mitigated. Corporate growth can be beneficial for the owners, managers and employees alike, since their interests are usually not damaged by growth but successful operation benefits them in fact.

A company's movement along a growth path depends on several factors. Environmental

impacts and internal characteristics are both determining factors in the development of a company's path of life thereby influencing growth. Of today's challenges, it is not an easy task for a company to advance along a growth path. Therefore it is important to map the key factors and motivations that serve reaching this objective best.

The definition of corporate growth is not at all clear-cut even in our days. Its importance is not questioned, though its exact definition and indices give rise to many debates. The statement of R. B. Young referring to macroeconomic growth quoted by Kálmán Dabóczy in his paper entitled 'Fogalmak által megcsalatva...' ['Cheated by concepts'] is a very fitting one, "*Growth is one of the most frequently used but least defined phrase in economic encyclopaedias.*" I believe that the above-referenced statement holds true not only for macro- but also for micro-level growth.

Growth usually means a positive change in the life of a company that can be expressed numerically and in which value judgements play no role. In the following I intend to list some opinions that reflect various considerations of corporate growth. Adizes says, „Corporate growth can also be interpreted as such a corporate *capability* that allows the company to cope with larger, more complex problems.” (Adizes; 1992. p. 19)

In Vajda's article we can read the following, „we consider organisations as growing ones that have expanded their operations and/or headcount and/or market or whose owner „has reached out” towards other enterprise(s).” (Vajda; 1997. p. 91).

As Kihgyi puts it, „growth in the strictest sense of the word is a kind of performance indicator which means the increase of turnover or sales.” (Kihgyi; 2001. p. 323) According to Katits, „in practice, growth is mostly interpreted as the size of corporate growth while measuring corporate growth is not clearly defined. Corporate growth is partly measured qualitatively, but mostly quantitatively. In the latter case corporate growth is considered as the measure of the quantity of the factors of production, the value of the means of production, capital investment and performance, etc.”. (Katits; 2002. p. 183) In my opinion, corporate growth is a phase in corporate operation that reflects a successful combination of corporate strengths and opportunities deriving from the corporate environment and it is marked by an increase in the output.

In order to identify the driving forces of growth, first and foremost, we will need to consider the group of persons influenced by growth since growth motivation may be related to and derived from their objectives. It is important to consider those influenced by growth since corporate growth is not an end for the company as an organization in itself but derives from the expectations of the persons influencing the organisation. Let us first of all consider which persons we can consider as being influenced by the company and therefore by corporate growth.

The stakeholder of corporate growth is a person or a group of people that may influence the operation of the organisation and/or has an interest in the same. According to Hungarian terminology, we can distinguish two groups of stakeholders¹ as follows,

1. **Internal stakeholders:** the economic players who belong to a given organisation, are members of the same or play a role in the same. The following persons fall into this category:

- owners (capital investors): their aim is to enhance value and operate capital in a profitable way.
- managers (operative decision-makers): their aim is to perform the tasks set by the owners, their link to the company is the most personal one.
- employees (executors): their primary aim is to maximise their own income.

2. **External stakeholders:** persons that are not part or members of the respective organisation, the organisation's operation may still have a positive or negative influence

on them. The following persons belong here,

- buyers – the market in the strict sense of the world,
- competitors who urge the company for innovation,
- suppliers – dependence is mutual but not symmetric,
- financial investors, creditors,
- strategic partners (horizontal relationship, vertical integration)²,
- governmental institutions that have either direct or indirect influence on the company,
- local and voluntary civilian communities, the „civil sphere” by current terminology,
- the natural environment.

Generally the aim of the various stakeholders (owners, managers, buyers, financial investors, etc.) and the challenges presented by the international, macro- and microeconomic environment jointly drive companies towards corporate growth. In the following, I am going to highlight the most important motivating factors (relying on and supplementing Vecsenyi; 2003/ pp. 309-310).

Proprietary value and motivation is perhaps the most crucial driving force towards growth. Owners have a vested interest in increasing shareholder value. Shareholder value is defined with the help of discounted future cash flow. Achieving corporate growth is important in terms of increasing shareholder value since one of the ways to increase discounted future cash flow is to raise sales income over the years. Because if a company is no longer able to generate more discretionary cash flow by enhancing efficiency, it shall have to increase sales. In the event the owner does not withdraw but rather retains the profit generated and uses the same for development, he shall take steps in order to enhance corporate or shareholder value. We must, however, also note that owners' dividend expectations are not always in concert with growth. Because a company's future growth potential may in fact be limited by the dividends distributed. The intention to avoid taxes may also be a motivation behind growth objectives. Company owners might plough their profits back into the company in order to avoid steep taxes (e.g. tax on dividends). The afore-mentioned are the main concepts of the *shareholder value theory*. According to the shareholder value theory³ companies' main aim is to operate in their owners' interests and for their well-being, which is expressed in the maximisation of 'proprietary value' (shareholder value). The main figure of the shareholder value theory is Alfred Rappaport (2002) and its representatives, of others, are Wenner-LeBer (1989), Copeland-Koller-Murrin (1999) Black-Wright-Bachman, Davies (1999).

The motivation of the other highly important stakeholder group, the **managers**, also supports growth. Managers are interested in growth in order to prove the efficiency of their own operations. We can usually find a successful management behind expanding businesses and this is not by mere chance. Growth evidences to managers their own knowledge and professionalism. The managerial theories can be related to all these. The theories that evolved in the 1960s acknowledge that power within the organisation has shifted from owners to the management. These theories emphasize that the interests of owners and managers (may) differ from each other. The management's aims and aspirations (may) displace the traditional theory of profit maximisation considered as a primary aim by owners at the time and advance new objectives instead, such as striving to increase sales or investments. Of the pioneers of this theory we may mention the names of Baumol (1959) and Marris (1963, 1964). Researchers suggest that the companies' objectives are identical with those of the managers. In the theory offered by Baumol and Marris, managers link profit and success with corporate size. Managers' income, bonuses and other emoluments very often increase as the corporate size becomes larger. In addition, such non-pecuniary incentives as prestige, career opportunities, social status and power, are also linked with corporate size (and the enlargement of the same). Consequently, besides financial performance, corporate size (and corporate growth) is an important factor in judging management activities. In small and young companies, activities to maximize growth may be identical with profit maximisation, and therefore managers have no conflict of interest between their obligations towards owners and their own individual objectives (Coad, 2007. pp. 34-35 makes reference to Mueller's work of 1969). In other cases, however, managers have to make a choice as to whether they give

prominence to shareholders' objectives to maximise profits or their own interests in maximising growth.

The diversification pressure that is getting more and more pronounced in companies nowadays can be linked to **competitors** as stakeholders. With the market competition getting ever keener, more diversified companies are more able to spread their exposure between their various activities than those with a lower level of diversification. „Standing on several feet” is also a way of survival and expansion.

We also have to mention the constant fluctuation of **consumer demand**. The ever widening range of requirements presents new challenges to companies to cope with. If a company appears on the market with products for which demand rises instantly, it will need to utilise this opportunity. „In this situation there is just one thing we cannot do, that we do not satisfy the increasing ready demand.” (Béza et al. 2007. p. 93)

The interests of **financial investors** also prompt companies to grow. Financial investors are interested in the movement of share prices which are related to corporate growth. The value judgement of the market is reflected in share price. For listed enterprises growth expectations are obvious since this is the only way for shareholders to make exchange gains.

Corporate growth may be necessary in order for the company to maintain its market position. The market positions of small and large companies are not the same at all, therefore a larger corporate size may be advantageous with respect either to purchasing input materials or selling the output. In many markets saturation can be perceived nowadays, an indication that competition is getting ever fiercer. As a result of price war, permanence in the volume of corporate sales would lead to shrinking profits, so more sales are required to reach larger profits.

A further motivating factor is the pressure exerted by **economies of scale**, which is a challenge to decrease the average cost of goods by reaching an optimum production size. This important 'microeconomic theorem' is one of the material driving forces of growth since it may also contribute to enhancing shareholder value. When an economical plant size is reached, it has consequences on the external market too. Since the product mass produced by the increased plant size is not marketable on the domestic market in every case for the limited absorptiveness of the market, economies of scale often encourage external sales and the internalisation of companies.

We may furthermore mention safety aspirations as a driving force towards growth. Moderate growth is also the basis of safety. The effects of globalisation may also impel companies to grow in many cases. By stepping up production or relocating production facilities abroad, companies can also bank on global cost benefits.

The aforementioned reasons generally direct companies towards corporate growth. Of the motivations, in my opinion, shareholder value and managerial motivations could be highlighted. There are many debates in technical literature whether the two reinforce or rather counteract each other⁴. I believe that the justification put forward by the shareholder value theory may be accepted in this respect, according to which these two motivating factors „drive” companies in the same direction. Rappaport

mentions four factors that „urge managers to accept the shareholder value theory, namely, a relatively high ownership share, managerial remuneration linked with owners' yields, threat of external acquisition and competition in the labour market of company managers". (Rappaport;2002. p. 18)

The following is a central question in growth research, "Is there a **pressure of growth** regarding enterprises? I think the answer is not definite. Not all companies want to grow even in other days. For example, family enterprises are often satisfied with maintaining a size that ensures their living. Nevertheless, in many enterprises, growth is ranked at the top of owners' expectations, which is kind of an imperative for managers.

I find it important to note that growth cannot only be the consequence of the conscious deliberation of owners, but– as has been listed among the motivations above – a necessity presented by their environment too. In most cases, nevertheless, we cannot judge from the outside why growth actually takes place within a company.

The changes in what indicators could help us depict companies' growth willingness? Growth willingness can be listed as an internal factor of corporate growth and as a behavioural factor within. (based on Szerb; 2008. p. 16) It can primarily be mapped by interviewing owners. However, companies' retained profits may also be indicative of growth willingness. Since companies' willingness to grow may be reflected by that owners retain their profits and by doing so express that it is important for them to realise growth from this internal source. In order to justify this, I have analysed the data of processing companies in Zala County (Hungary).

The properties of the sample:

- Population: processing corporations of Zala County
- Size: 200 (hereinafter referred to as ZALA200).
- The method of drawing: stratified sampling according to sub branches by random query.
- Data source: company accounts and articles of associations studied at the Zala County Court acting as Court of Registration.
- The time frame of the study: 2003-2007⁵. I only examined enterprises that operated for the whole of the surveyed period.

Table 1 gives the composition of processing companies of Zala County and ZALA200 according to company form.

Table 1. The composition of processing companies in Zala County and ZALA200 according to company form in 2003

Description	Processing enterprises in Zala County		ZALA 200		The ratio of ZALA200 enterprises to processing enterprises in Zala County (%)
	Number (pc)	Distribution (%)	Number	Distribution (%)	
Ltd.	580	54.7	130	65.0	22.4
Plc.	21	2.0	11	5.5	52.4
Cooperative	8	0.1	0	0.0	0.0
Limited partnership	452	42.6	59	29.5	13.0
Total:	1061	100.0	200	100.0	-

Source: own compilation based on Table 13.5 of the CSO annual of Zala County of 2003 and own research

ZALA200 enterprises are limited liability companies in 65.0 percent and this segment of processing companies in Zala is overrepresented (65.0 percent >54.7 percent). The percentage of public limited companies within the sample is 5.5 percent, which is higher than the percentage of PLCs within the population, therefore this form of company is also overrepresented. There is no cooperative in the sample, but it is acceptable due to the minimum weight of cooperatives (0.1 percent of the population). Limited partnerships are underrepresented in the sample (29.5 percent <42.6 percent).

If we examine the number of employees employed by the ZALA200 enterprises in 2003 (8,628 heads), we find that those employed by the processing industry of Zala County (19,648 heads)⁶ were employed by the companies represented in the sample in 43.9 percent.

Since the primary aim of my survey is to analyse the growth willingness of companies, I examined in what percentage ZALA200 enterprises realised a positive profit or loss after taxation (hereinafter referred to as a profit) and how many of them retained their profits. I believe that retained profits and the rate of the same may be indicative of companies' growth willingness. Table 2 shows the profitable enterprises of ZALA200 and their composition according to their profit retainment rates (b⁷).

Table 2. ZALA200 companies making a profit after taxation and their composition according to profit retention rate between 2003 and 2007

Description	2003	2004	2005	2006	2007
The number of profitable companies (rate in % as compared to ZALA200)	156 (78.0)	160 (80.0)	157 (78.5)	166 (83.0)	169 (84.5)
Of which					
The number of exporting companies (their rate in %)	43 (27.6)	42 (26.3)	41 (26.1)	46 (27.7)	45 (26.6)
The number of companies retaining profits (b>0)	148	153	151	153	162
The number of companies distributing all their profits as dividends (b=0) (their rate in %)	6 (3.8)	7 (4.3)	6 (3.8)	11 (6.6)	7 (4.1)
The number of companies retaining profit after taxation in full (b=1) (their rate in %)	120 (76.9)	122 (76.3)	129 (82.2)	130 (78.3)	139 (82.2)
The number of companies distributing dividends in excess of profits (b<0) (their rate in %)	2 (1.3)	-	-	2 (1.2)	-
Average profit retention rate (in %)	85.8	85.5	89.3	83.8	89.0
Average export percentage of profitable companies ⁹ (%)	12	10	10	11	11

Source: own research

Table 2 shows that 78-84.5 percent of the surveyed companies realised profits after taxation between 2003 and 2007. This rate does not show fluctuations over the years. On the average, 26.1–27.7 percent of profitable enterprises also realised sales abroad during the surveyed period. The average export rate of profitable companies is not high (between 10 percent and 12 percent), but it slightly exceeds that of the ZALA200 companies (8.7-10.6 percent).

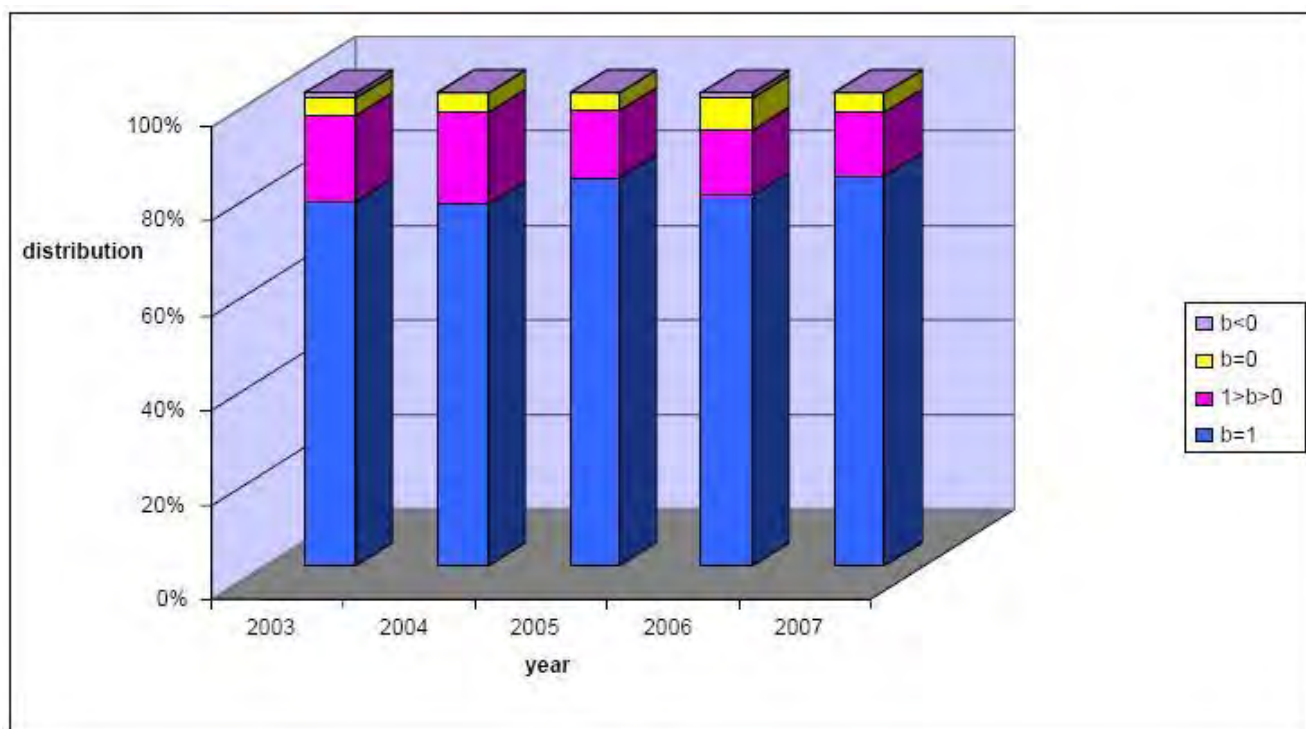


Fig.1. The distribution of ZALA200 companies making a profit after taxation according to the size of the profit retention rate (b) between 2003 and 2007

Source. Own compilation

The rate of profitable companies not paying dividends at all and keeping 100 percent of their profits after taxation in the enterprise (76.3-82.2 percent) is high (see Figure 1). As a result of this, the weight of companies paying out all their profits in dividends is low. These enterprises amounted to 3.8-6.6 percent of all surveyed businesses between 2003 and 2007. Based on the high rate of companies retaining the total of their profits, we may deduce that the owners of the enterprises prefer retaining their profits after taxation and using the same to finance the future operation and expansion of the respective company. This is further supported by the fact that the average profit retention rates of these companies ranged between 89 percent and 93 percent in the surveyed years.

I also examined some typical indicators of profitable companies with positive profit retention rates exhibiting a growth willingness funded by internal sources.(Table 3)

Table 3. Typical indicators of ZALA200 enterprises characterised by positive profit retention rates

Description	2003	2004	2005	2006	2007
Average age of enterprises (year)	6.1	6.8	7.7	8.9	9.5
Average number of employees (heads)	44.1	47.0	55.6	56.2	53.63
Average capital leverage ¹⁰	1.7	2.9	2.2	1.9	1.8
Average profit retention rate (%)	90.9	89.4	92.8	91.7	92.9
Internal growth rate (%)	12	15	9	12	8
Sustainable growth rate	45 ¹¹ (31)	30	25	24	23

Source: Own research

The average age of enterprises having positive profit retention rates shows an increase year after year with the average age of companies increasing by almost one year in each year. It can be justified by that mostly the same companies belong to the 'b > 0' range. With the exception of 2007, we can see an increase in the average number of employees too. The average capital leverages of companies ranged between about 1.7 and 2.9, which means that companies' assets were decisively financed by foreign capital in ZALA200 companies. The average 'b' value fluctuated between 89.4 percent and 92.9 percent. The average internal growth rate was between 8 percent and 15 percent in the surveyed period. This indicator reflects the maximum growth rate that can be achieved by enterprises within one year utilising retained profits only. The sustainable growth rate showed a continuous decrease from the rate of 31 percent of 2003⁸ to 23 percent in 2007. This rate shows what growth rate companies would be able to achieve without changing the capital leverage.

In summary, we can state that in the case of ZALA200 enterprises, growth willingness based on shareholder motivation could be observed, since a high percentage of profitable companies retained their profits. We must also add, however, that development may be achieved not only with the help of internal but also external sources. This paper did not aim to analyse the latter.

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Notes

¹ We must note that the categorisation of people involved in Anglo-Saxon terminology is different

from the one used by the Hungarian terminology. According to this, the two groups of people involved are those of stockholders' (owners) and stakeholders' (the other people involved in any way), respectively.

² The group of stakeholders is a border-line category between external and internal stakeholders.

³ From the 1980s, of company management theories, proprietary (shareholder) value theory has gained significance mostly in the USA (where capital market operates much more efficiently than in Europe) and in Great Britain. Since then, this theory has also gained ground in several European countries.

⁴ E.g. Ónodi Annamária (2004. pp. 60-72)

⁵ I chose this interval because I wished to eliminate the consequences of the global economic crisis starting in 2008.

⁶ Based on Table 17.11 of the Zala County Annual of the Central Statistical office of 2003

⁷ b = Balance sheet profit or loss / profit after taxation

⁸ Adjusted data, see footnote no. 10

⁹ Export percentage: the ratio of export sales to total sales

¹⁰ Capital leverage = foreign capital to equity capital

¹¹ This data was the result of a single outstanding sustainable growth rate. If we leave this company out of the sample, the rate will have the value of 0.31.

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