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Graphics:
Arch.student Adelina Dima
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Lecturer Rocsana Bucea-Manea-Ţoniş

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Foreword

In the context of an extended globalization, each company has to adjust their activity in order to achieve economic effectiveness and quality of production, labor and management. This desideratum should take into account concrete modalities to connect nature with available technologies, scientific knowledge and social innovation, as to assist sustainable development for the entire society. Hence, the companies have to comply with the "Primum non nocere" principle. Otherwise, the consequences borne by future generations are too big. Every one of us should have a social responsibility.

For management, the trend is to develop a new international management architecture, based on competitive strategies, policy and law. The managers are considering many factors: markets, technological development, innovations, products, services, competitive employees and the ecosystem.

In an ever-changing world, the legal system and the legal methodology must be tailored to the behavior of both the consumers and producers. The boom of the internet distributed applications and media content rise the need of pubic licenses linked to Intellectual property, shared in the www environment.

We admit that once a paper or a piece of software is distributed on the internet, the author's legal rights and benefits over that piece of work are drastically diminished. This is the reason why we strongly support the public licensing of any intellectual/artistic product that allows the consumers to freely use and share, but at the same time prevents any users from assuming the authorship of that piece of work for themselves.

Some software development methodologies are well suited to the industrial management, as they develop products in an iterative manner. This is how the car manufactures release new designs built on the same chassis almost on a yearly basis, while continuously adjusting the offer to the requests coming from the consumers. The feedback from the clients builds up in a knowledge base for further innovations. Another advantage of the flexible methodologies is to delegate the decision making and the control measures. Any project member from a company can thus be a project manager for a different project, hence encouraging the initiative and the cross-testing

The legal system is put to test by flash mobs summoned to gather via mass mail/messages sent through social networking. That seems to be a virtual agora customized to the trend of the international globalization extinction.

Lecturer Rocsana Bucea-Manea-Tonis, PhD cd

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Empirical Investigation of Industrial Management

Professor Elenko Zahariev, PhD

University of Agribusiness and Rural Development – Plovdiv, Bulgaria
ezahariev@uard.bg

Abstract. *The paper is devoted to an aspect in the sphere of management – business priorities of industrial management in XXI century. In modern times the actuality of treated problems is mainly laid into the necessities of the real management practice in industrial organizations and the need theoretical and applied knowledge to be offered to that practice which would allow it methodologically right and methodically correct to implement the corresponding changes in management of a concrete organization. Objects of analyses and evaluations are some fragmented approbations of theses using the corresponding instruments. The characteristic features of the organizations' profiles and the persons interviewed participated in the investigation are summarized. The determining approaches for Bulgarian organizations are considered too.*
On the basis of the critical analyses the fundamental tasks are drawn which are inherent to contemporary industrial managers. Attention is paid to key management functions for an effective managerial process. An analysis of managers reaching the best results in industrial management is presented as well as when they are reached. Outlined are also specific peculiarities of industrial management in the Republic of Bulgaria and parameters of the level of productiveness in conditions of business globalization and priority forms in marketing of the ready product / service in XXI century. The results of the launched idea for the necessity to create a new International management architecture (NIMA) are determined – structure and structure defining parameters. The results of the investigation of main business priorities in industrial management are commented as well as expected problems in the process of functioning of industrial organizations in XXI century. At the end the corresponding conclusions are made in respect to the techniques used in determining effectiveness of industrial management in Bulgarian organizations.

Keywords: industrial management, management architectonics, respondents, business priorities, globalization, global environment, management architecture, management approaches, fundamental management tasks, key management functions, economic effectiveness, financial profitableness, growth analysis

JEL Codes: G32, F6, F64

1. Introduction

Development, introduction and exploitation of organizational innovations in management are continuous, cyclically repeated processes implemented by man but subordinating to definite objective regularities finally. Their acquaintance and use in the economical practice is a necessary condition for the progress of industrial management. The purpose of the paper is to determine at what extent is the availability of relationship between theoretical and methodological fundamentals of industrial

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management and its state in Bulgaria on the basis of a study of the practical experience in that field[1]. The study considers expected business priorities of industrial management in the country during XXI century and the necessity to create a new form – the New International Management Architecture (NIMA), for distribution and popularization of good management practices in industrial management which to be accompanied by a strong regulation and achieved consensus in creation and introduction of alternative forms of institutionalization of professional standards, control and monitoring over industrial management.

The industrial companies should take in account ISO 9001 Quality Management System (QMS). In his paper [Oliveira, 2013] the author proposed guidelines that were divided into three phases: a) integration planning, b) integration development, and c) integration control and improvement.

The marketing managers in industrial companies have to make progress in attaining theoretical unity in understanding of buyer-seller relationships and industrial networks. [Peters, 2013]

The objects of investigation are industrial managers and specialists in organizations with different structure of ownership, reflecting the essence and the content, laws and regularities in industrial management. The choice is substantiated by the following considerations: *First*, contemporary industrial managers, besides approaches towards management and key management functions, face three fundamental management tasks: activities and organization management, human resources management, production and operations management – and the prosperity of economy and society as a whole is dependent on their successful implementation. *Second,* the dynamics in the structure of industrial managers and specialists, strict conformity to key parameters of companies' management and organizational restructuring in industrial organizations in direction of conformation to main business priorities of the Republic of Bulgaria in XXI century pose problems which solution sets the necessity of effective industrial management.

The main reason for the lack in new facilities managers is the severely limited number of formal academic programs that specifically educate students in FM. [Meneghetti, 2012]

2. Material and methods

2.1. Parameters of investigation

The investigation is conducted in the period September 2009 – June 2010 with representatives of economic subjects on the territory of the Republic of Bulgaria. On the basis of the prepared sample are conducted 106 effective interviews with managers and specialists from different hierarchical levels in different branches, sub-branches and production types. The method of information collection is a direct standardized interview. The information is manipulated using statistical software product SPSS. Specialized

[1] The current study is a result of a self-dependent investigation of the author. The priorities of new realities in development of management theory and practice are deduced and the objective necessity of a new ideology for the priorities of the Republic of Bulgaria in XXI century are substantiated – entrepreneurship, industrial management in new global environment, knowledge-based economy, corporate social responsibility and ethics, new corporative culture, as well as the ways of application.

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instruments are developed for studying the state of industrial management in Bulgarian organizations in the type of a questionnaire form. It is used in the registration of the individual information and contains 25 questions put to persons under investigation. The questions are conditionally grouped in several thematic sub-groups:

1. Principal fundamentals of industrial management. The purpose is to reveal its architectonics including:

- main approaches – classical, behavioral and scientific;
- opportunities for their integration in contemporary conditions;
- fundamental management tasks connected to the management of activities and organization, human resources management and production and operations management;
- key management functions – planning, organization and control.

2. Results of application of industrial management and the dependence on:

- education;
- duration of executed functions;
- team work;
- key parameters of companies' activity;
- business internationalization;
- productivity and quality of work;
- priority forms in the marketing of the ready product / service.

3. Positioning of the main priorities in industrial management – they are drawn as:

- structure defining parameters of NIMA;
- management in globalizing world;
- social responsibility and ethics in the organization;
- entrepreneurship;
- career management.

4. Instruments for determining the effectiveness of industrial management – because of the lack of universal instruments several techniques are scrutinized:

- analysis of economic effectiveness of the organization;
- analysis of financial profitableness;
- analysis of the growth.

In the questionnaire the notional indicators are operationalized and verified from the point of view of the subsequent processing, analysis and interpretation of the collected results.

3. Results and discussion

3.1. Profile of the organizations participated in the investigation

According to the object of activity the economical subjects are grouped after answering spontaneously an open question. Five are the identified activities grouped according the Classification of economic

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activities 2008. Three of them have approximately even weight in the investigation – processing industry (C – 25%), production and distribution of electric and heat energy and gas fuels (D – 24%) and other activities (S – 25%). Almost 25% of the interviewees are representatives of trade, car and motorbike repair (G – 16%) and extractive industry (B – 10%) (Fig. 1).

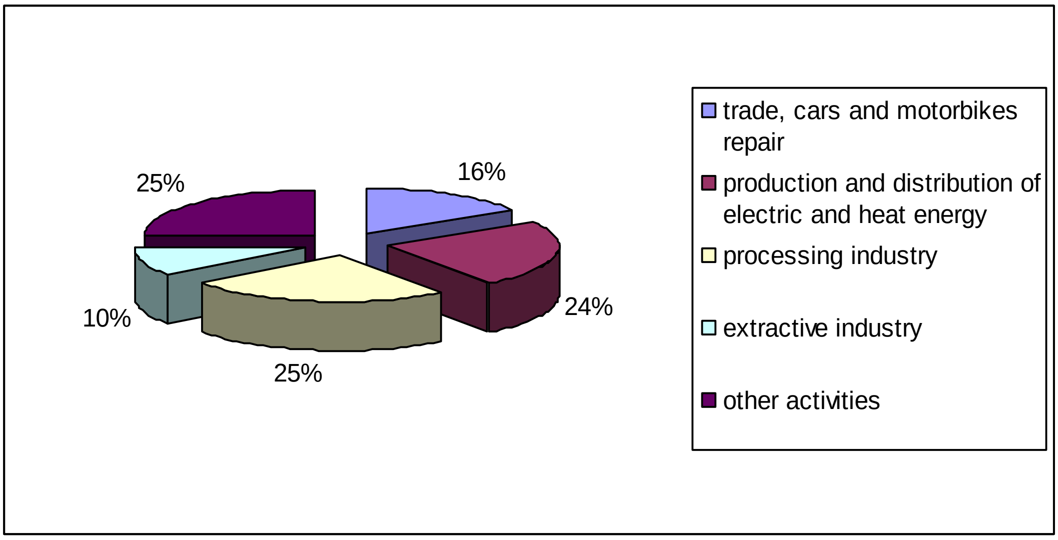

Fig. 1: The main objects of activity of the organizations took participation in the investigation

The share of the organizations with foreign partnership (partial or whole) in comparison to Bulgarian is in the relation 1:3. Mixed companies and those whose property is only to foreign investors are both equal numbers (13% of the respondents) (Fig. 2).

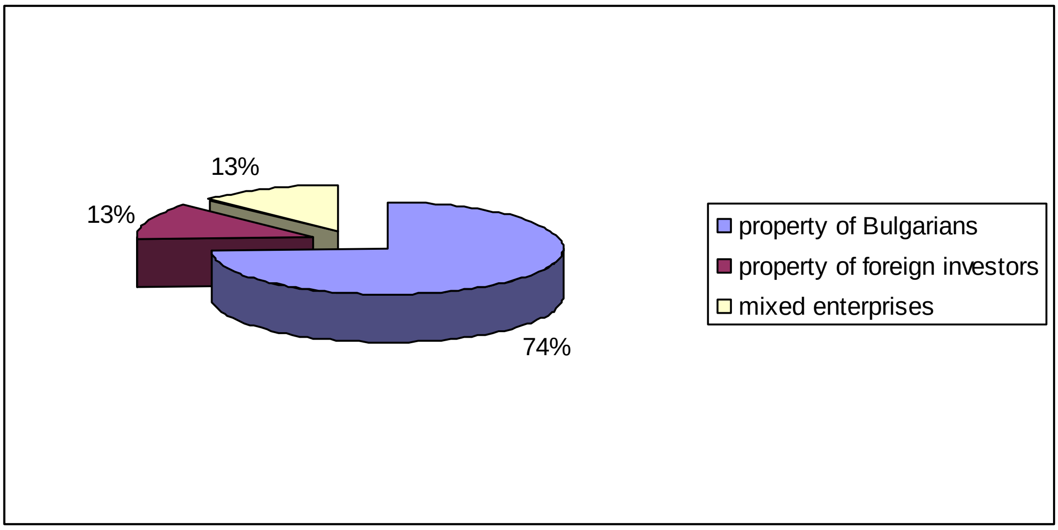

Fig. 2: Ownership of the interviewed organizations

From the point of view of juridical status, in the investigation a broad spectrum of organizations is embraced. The representatives of privately-owned joint-stock company and joint-stock company are 29% and 23% respectively. Privately-owned limited liability companies – 13%, limited liability companies – 10%. Holdings and sole proprietors are 9% and 6% respectively. Limited joint-stock companies are 1%, and other – 9% of the interviewees.

The size of the organizations is determined by the number of their employees. In the investigation the groups of economical subjects with different employees' number are represented comparatively equal. The organizations with staff from 51 to 100 persons are 4%, 101 – 250 – 11%, united in a group (Fig. 3).

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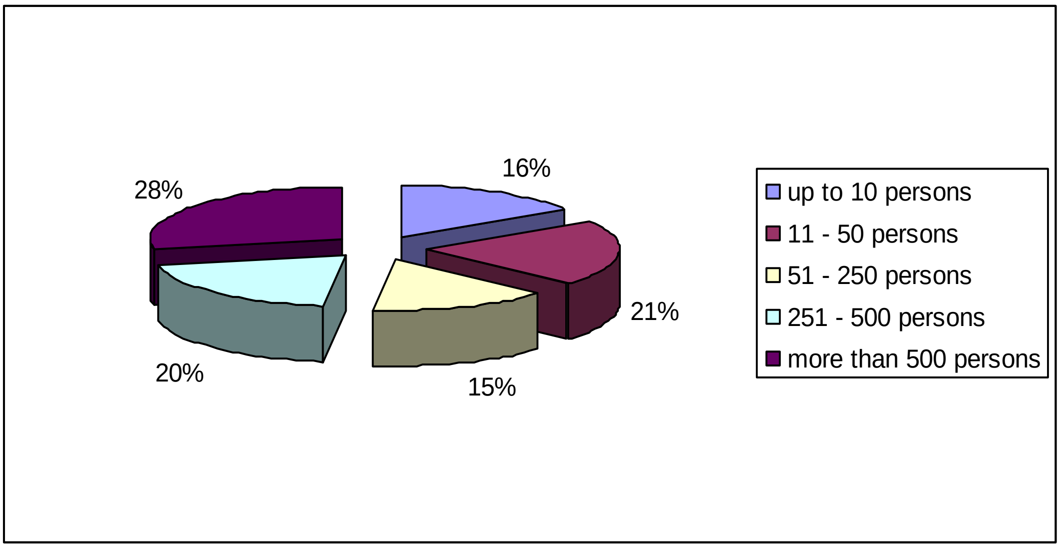

Fig. 3: The size of the organizations participated in the investigation

According to the management organizational structure, the economical subjects are grouped after answering an open question. The biggest number is that of functional organization management structure – 37%, and linear – 30%. Divisional - 14%, linear-staff – 6%. The percentage of those that had not answered is not small – 13%.

3.2. Profile of the interviewees

Among the most important parameter for the needs of current investigation are occupations of the interviewees in the frameworks of organizational structures. The expert level of the posed questions requires participation of persons occupied on high levels in the organization's hierarchy. That's why over the half interviewees are high managers (58%). Functional managers are 25%, specialists – 17%.

A direct connection with the occupation in the organization's hierarchy and the needed expertise level in the investigation has the degree of education of the interviewees. 84% of the interviewees have higher education. 83% point only higher education, 1% higher technical education. Both groups are united in the group of higher education graduates. High education graduates are another main group – 16% (8% high professional education, 6% only high education, 2% high economic education).

Regarding gender men have bigger participation in the investigation (71% of the interviewees), women – 29%.

Looking at the age (Fig. 4), good representation of all age groups could be reported: 31-40 years (30%) and 41-50 years (29%) are the main groups because of the required high level in the organization's hierarchy which are very active in respect to career development.

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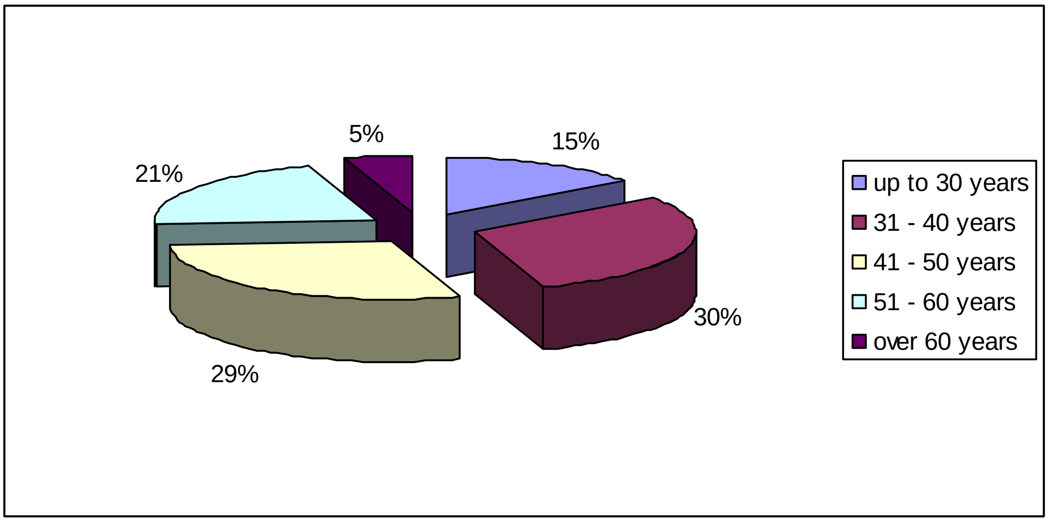

Fig. 4: Age distribution of the interviewees

3.3. Main results of the investigation

After processing filled questionnaires the following trends are pointed in respect to the problems under investigation:

3.3.1. Industrial management in the Republic of Bulgaria

On the question of determining for the organization approaches towards industrial management, 67% of the interviewees reply that it's the classical approach, mainly companies in extractive industry and processing industry (73% each). Classical approach is determining for 70% of Bulgarian and for 69% of mixed companies. Regarding the professionals acknowledging that approach in their organizations, those are 80% of functional managers and 80% of the interviewees aged 51-60.

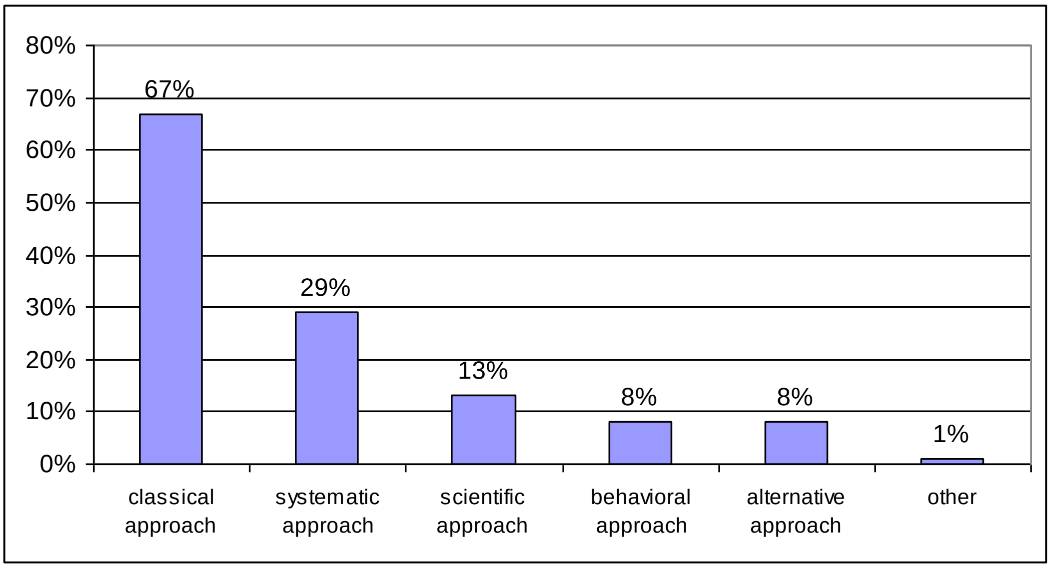

Fig. 5. Answers to the question "What approaches towards industrial management are appropriate for your organization" (more than one answer is possible)

The second position is for systematic approach which is pointed by 29% of the interviewees. It is the determining one for 55% of the companies in extractive industry and 44% of occupied in production and distribution of electric and heat energy and gas fuels. The systematic approach is the leading one for the half of small enterprises with staff from 11 to 50, as well as for 36% of high managers.

The scientific approach is determining for 13%. That is the approach of those organizations with the object of activity in trade, car and motorbike repair (for 29% of them), as well as for 23% of enterprises being property of foreign investors. For 20% of big economical subjects with staff over 500 persons, the scientific approach is the key one, as well as for 27% of the interviewees having high education. Behavioral and alternative approaches are leading only for 8% of the organizations each (Fig. 5).

In respect to managerial tasks, the most fundamental for 70% of the interviewees is the management of the activity of organization (Fig. 6). The biggest percentage adherents (91%) that understand have among representatives of extractive industry. Reserved towards that topic are the representatives of small organizations (staff up to 10 persons) – 47%, while for the rest support over 70% is reported. All representatives of linear-staff structure are behind the management of the activity of organization. High percentage is reported among the interviewees aged 51-60 (90%) too, over 60 years – 100% share the thesis.

Another managerial task, which is supported by 47%, is human resources management in organizations. It is essential for big organizations – supported by 58% of the representatives of the companies having staff over 251 persons. The representatives of divisional structure (67% of them) and functional managers (52% of them) are among the biggest adherents to human resources management as a fundamental managerial task.

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Production and operations management is pointed by 40% of the interviewees – companies having staff over 251% (54% of them point production and operations management), as well as 80% of the representatives of divisional structure – similarity in the profile with the preceding.

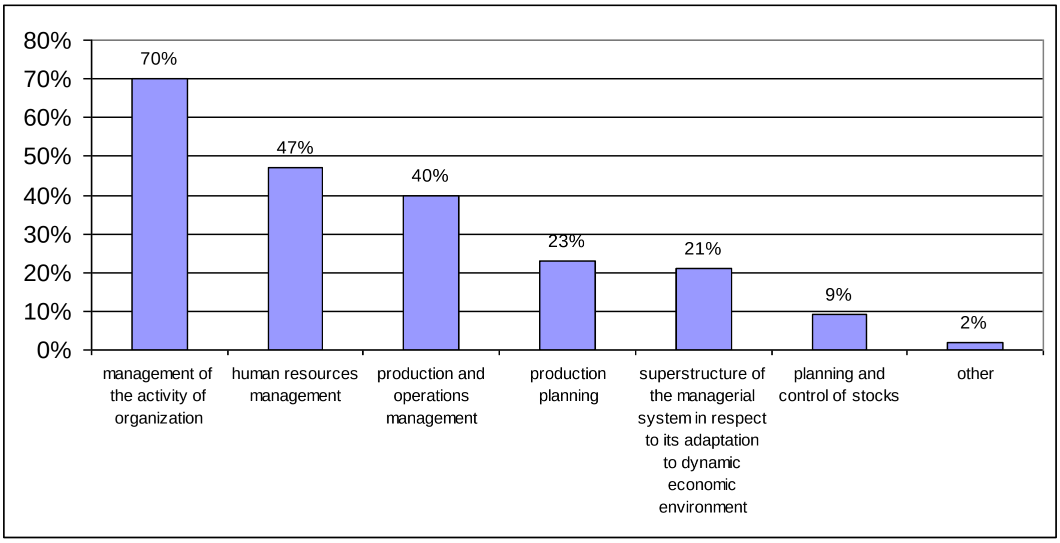

Fig. 6: Fundamental managerial tasks inherent for contemporary industrial managers (more than one answer is possible)

Lower is the support for production planning (23%), superstructure of the managerial system in respect to its adaptation to dynamic economic environment (21%) and planning and control of stocks (9%) (Fig. 6).

Regarding key management functions, three groups are formed according to the results. The first one is the most consensus management function – control (supported by 75% of the interviewees). In the second group, having similar values, almost the half, are four management functions – leadership (60%), planning (53%), organizing (50%) and coordinating (46%). The third group is of not so popular as understanding – regulation and other management functions (2% each) (Fig. 7).

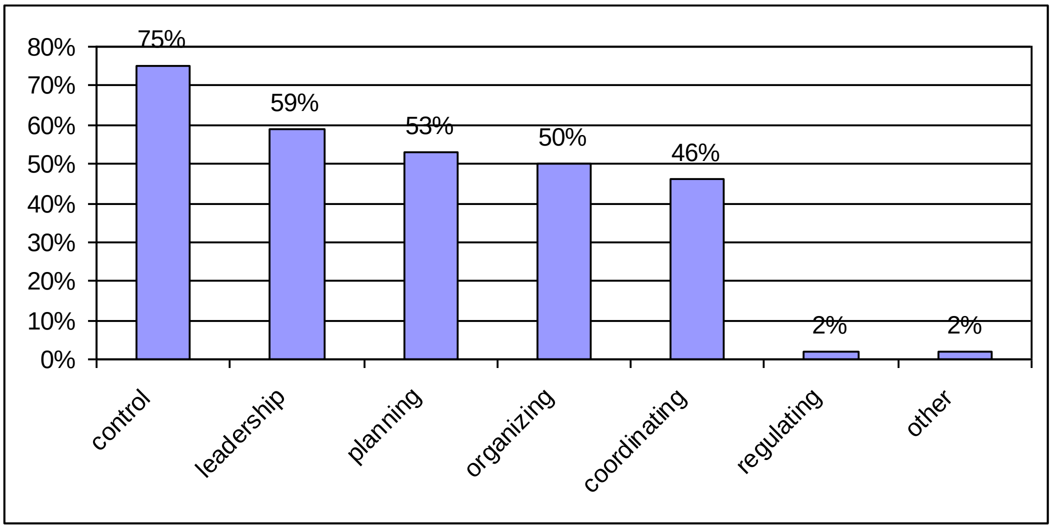

Fig. 7: Key management function for effective management process
(more than one answer is possible**)**

3.3.2. *Results of the application of industrial management*

According to the interviewees the best results in industrial management are achieved by managers (45%) and technical specialists (43%) (Fig.8). Representatives of extractive industry support that statements at the greatest extend (73% and 64%). In the rest of the groups such a consensus is not available. Behind the management staff is the organizations with linear-staff organizational structure (67%). Increasing the age of the interviewees, increases the percentage of support: up to 30 years – 40%, 31-40 years – 41%, 51-60 years – 45%, over 60 – 80%. High managers (48% of them) point mostly the management staff as the most successful in industrial management. Technical specialists have the best results according to 62% of the representatives of big companies having staff over 500 persons, for 80% of the interviewees from divisional structures, for 54% of higher education graduates (comparing to 13% of high education) and 56% of functional managers. Others with good results in industrial management are those having additional training in the field of management (for 36% of the interviewees), economists (27%) and jurists (10%) (Fig. 8).

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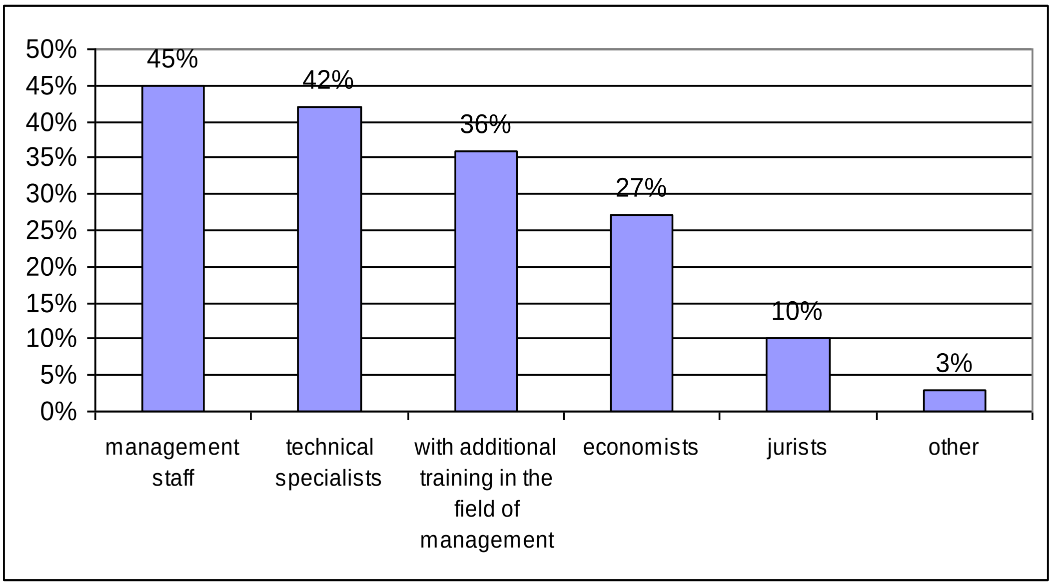

Fig. 8: "Who gains the best results in industrial management?"
(More than one answer is possible)

Those better results are achieved when managers stay for long periods in the organization passing consecutively through all hierarchical levels – that is the opinion of 74% of the interviewees (Fig. 9). The biggest percentage of adherents to that statement is among the representatives of extractive industry (91% of them) and processing industry (85%), as well as representatives of big enterprises having staff over 500 persons (97% of them). The percentage of the supporters of that opinion is also high among representatives of divisional structure (87%). 100% is the support of the respondents over 60 years old.

The second position, 47% support, is for the work with permanent team followed by frequent refresh of team in search for the best collaborators (9%), alternation of periods of overload and those with little engagement (8%) and frequent change of employer in search for new challenges (6%) (Fig. 9).

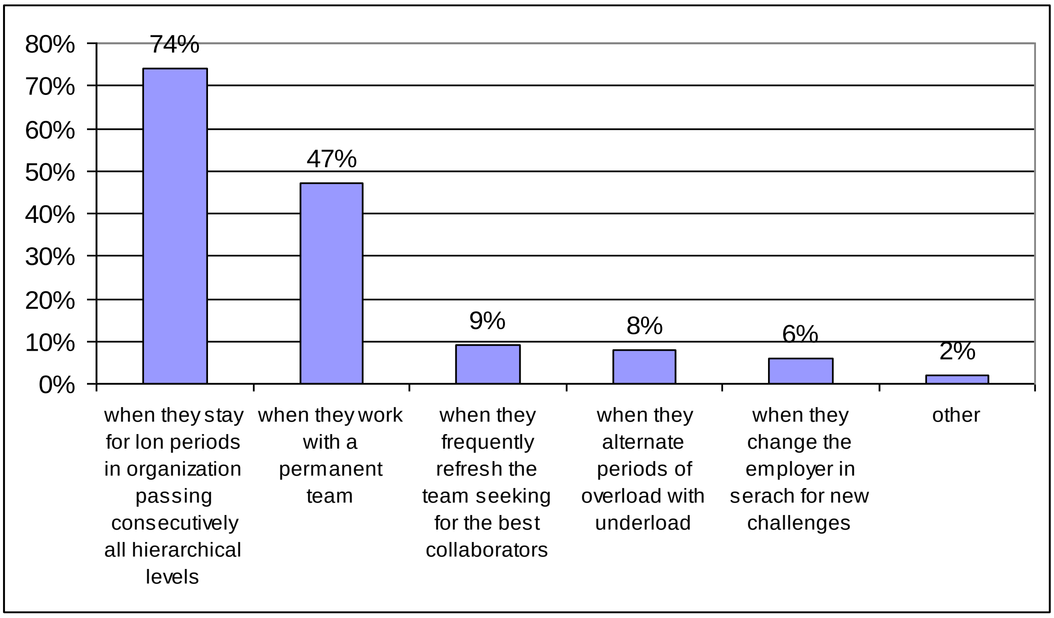

Fig. 9: Answers to the question "When managers achieve better results?"
(More than one answer is possible)

Very interesting is the support of higher education and high education graduates. Behind staying in the company and passing through all hierarchical levels are 82% of the interviewees with higher education and 53% of those with high education, while the work with permanent team is the reason for good results for 67% of high education graduates and 42% of higher education (Fig. 10).

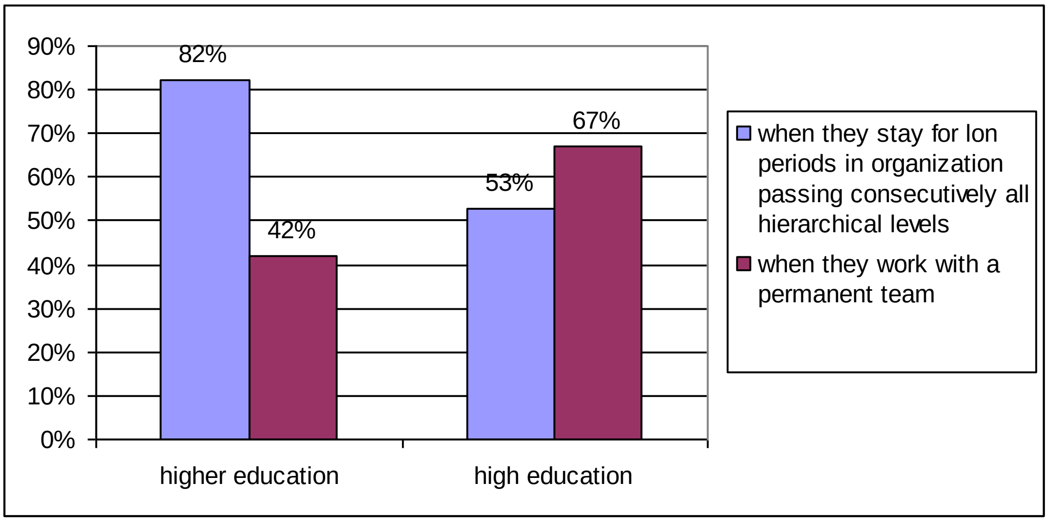

Fig. 10: Answers to the question "When managers achieve better results?"
- distribution according to the education of the interviewees

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The most important key parameter (Fig. 11) for the activity of 64% of the organizations is the economic effectiveness[2]. Most of its adherents are in extractive industry (81% of them), in companies having staff between 11 and 50 persons (77%) and from 51 to 250 persons (75%), as well as in the divisional structure (72%). Almost 75% of functional managers point it and about 33% of the specialists. The second popular parameter is the quality of production, labor and management which is pointed by 54% of the interviewees (Fig. 11). The biggest is the support by big companies having over 500 persons staff (66% of them point that) and representatives of divisional structures (87% of them). Increasing the age the percentage of supporting quality increases – up to 30 years old (47%), 31 – 40 years (52%), 41 – 50 years (61%), 51 – 60 years (70%). Over 60 years – none pointed it. The third place is for economic benefit (profit) which is marked by 40% of the interviewees. The most of its adherents are in trade, cars and motorbikes repair (65%), among the representatives of linear-staff structure (83%), among the interviewees with high education (53%) and representatives of organizations property of a foreign investor (46%). However, the choice of foreign investors is the financial stability which is a key issue for 66% of them. The financial stability is important for 25%, 23% point the expansion of production, 20% - revealing and realizing the full potential of organization. Only 3% mention the career development (Fig. 11).

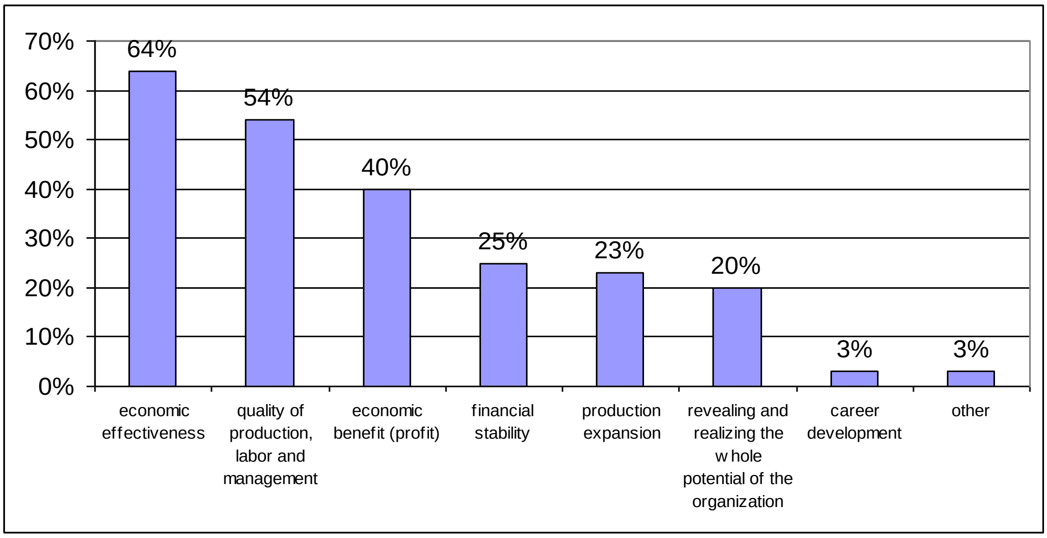

Fig. 11: “What of the pointed parameters are key for your organization’s activities?”
(More than one answer is possible)

[2] It should not be forbidden that “the care” of abiding key parameters of organizational management is on the first place care for that manager which wishes the organization to function normally, and “the therapy” is to become as possible less dependent on the changes in environment (macro and micro).

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The most specific characteristic of industrial management in the Republic of Bulgaria pointed by 38% of the respondents is that "the rules of industrial management are imposed by a regulator in the face of the state". The highest number of that statement is among the representatives of mixed enterprises (46%), in big organizations with over 500 persons in staff (59%) and 251-500 (52%), as well as among 60% of functional managers. Another peculiarity, pointed by 31%, is that "it is put as a mechanism of functioning in organizations which reflects the phase of the life cycle of the national economy". Supporting that statement are 53% of the interviewees with high education and 27% of those with higher education. 26% of the interviewees support the statement that the industrial management in the country "differs from the traditional management because of the role and peculiarities of organizations as elements of industrial policy". Having 11% support are two special features: "increased informational asymmetry because of the lack of transparency of business (corporate secret) and insufficient corporate reconnaissance" and "it causes informational asymmetry between inner and outer investors". "Other" is pointed by 2%.

The support for the statement of the use of active strategies for penetrating new markets is the biggest in all the groups and reaches 60% (Fig. 12). For 33% in order to avoid the risk of activities only in one geographical region is important as a prerequisite. Only 15% point "using redundant production capacity", for 14% is important to achieve savings from optimizing the quantities (Fig. 12).

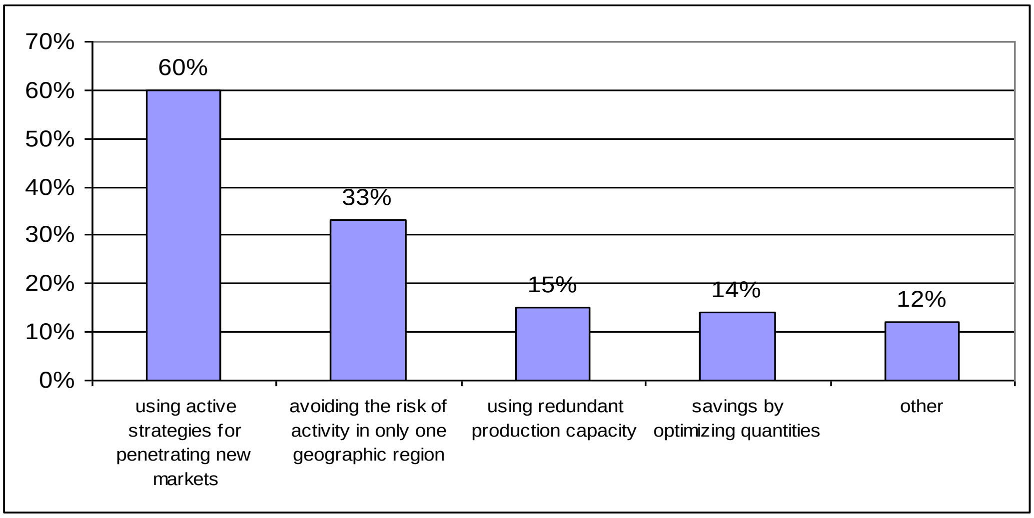

Fig. 12: Circumstances for internationalization of the organization's business
(more than one answer is possible)

The determining factors of the level of productivity in conditions of globalization in business are two – the quality of work and the level of techniques and technology. Both are pointed by 57% of the interviewees each: 73% of the representatives of extractive industry, 72% of those of production and distribution of electric and heat energy and gas fuels, while the quality of work is a priority for 77% of the

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representatives of trade, cars and motorbikes repair. The quality of work is determining for 66% of Bulgarian companies, while for 69% of foreign companies the level of techniques and technology is important. Specialists (71% of them) support the quality of work, while 72% of functional managers support the level of techniques and technology. Then the next factors come: the strategy of organization (for 40% of the interviewees) and the effectiveness of industrial management (21%).

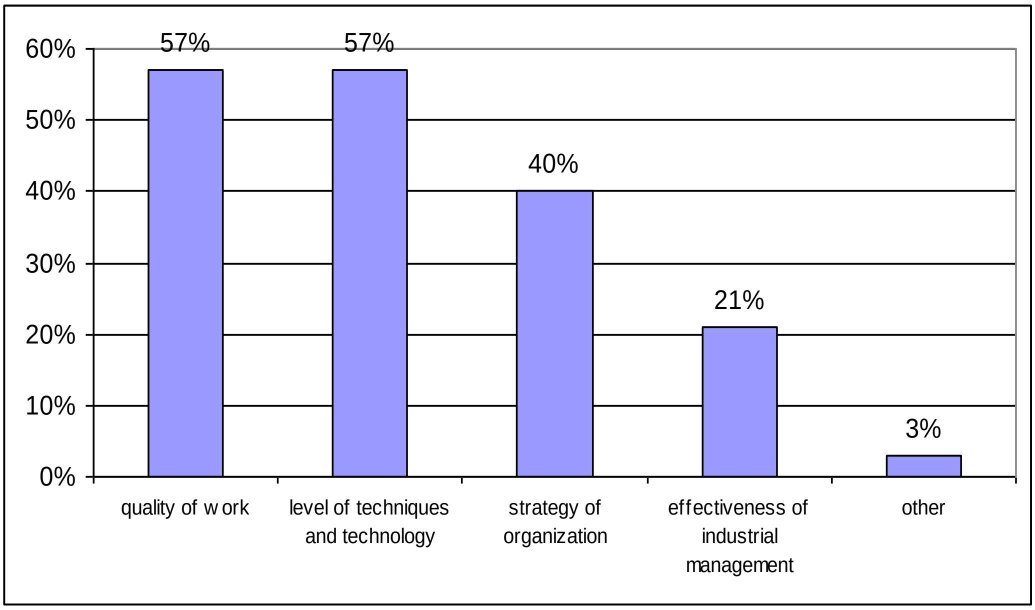

Fig. 13: Parameters determining the level of the productiveness in the organization in conditions of business globalization (more than one answer is possible)

For 42% of the interviewees a priority form for selling the ready product / service in XXI century will be the distributors – the representatives of processing industry (77%) and functional managers (64%) stand out. The second form is the promotion – for 35%. That is the choice of 62% of representatives of foreign investors, 47% of the specialist and 67% of the interviewees up to 30 years old. “Other” is pointed by 23%, 13% choose consignation, only 8% franchising (Fig. 14).

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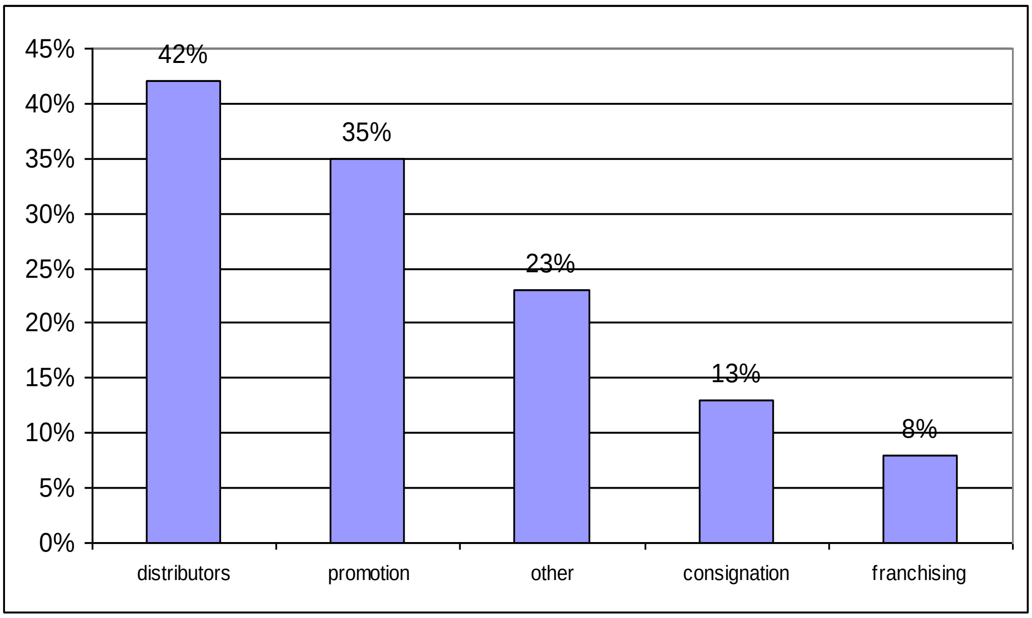

Fig. 14: Forms of realization of the ready product / service which would be of priority in XXI century (more than one answer is possible)

On the question about the necessity of creating NIMA the opinions are polarized (Fig. 15). The percentage of those which do not give any answer is not small (7.5% of the interviewees). 52% are positive, 48% do not find that necessity. The most definite groups supporting NIMA are the representatives of the extractive industry (73% of them), big companies with 500 persons (78%) and 251-500 persons (72%), divisional structure (86%) and functional managers (78%).

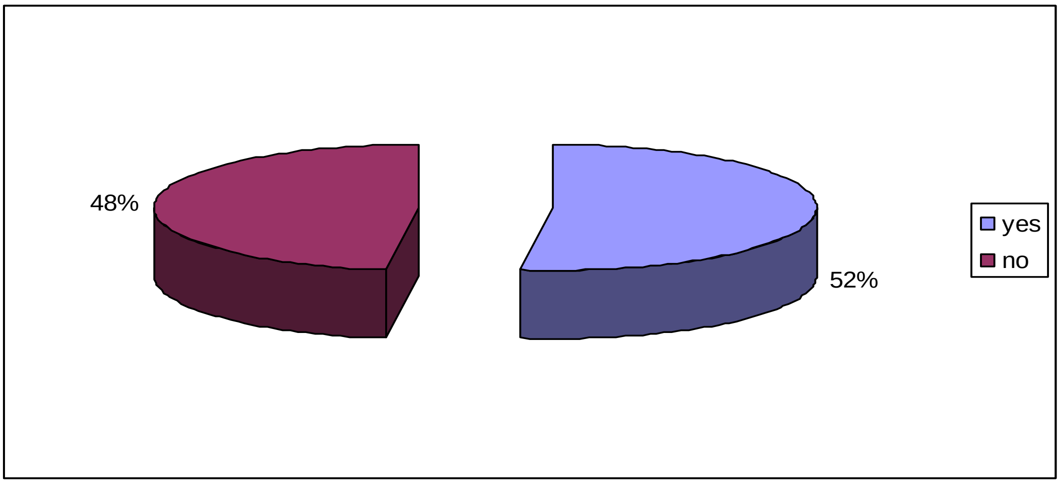

Fig. 15: "Is it necessary the establishment of NIMA in order organizations to answer adequately to the challenges of XXI century"

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The percentage of the opponents of NIMA is the highest among the representatives of trade, cars and motorbikes repair (56% of them), small enterprises having staff from 11 to 50 persons (76%) and up to 10 persons (75%), functional and organizational-managerial structure (62%) and specialists (65%).

On the question of the basic components of NIMA only those answered positively for NIMA give feedback. For 67% of them the strategy is the basic one. The second place is for globalization (markets, technological development, innovations, products, etc.). With support by under the half of the interviewees are the principles (49%) and the policy (22%) (Fig. 16).

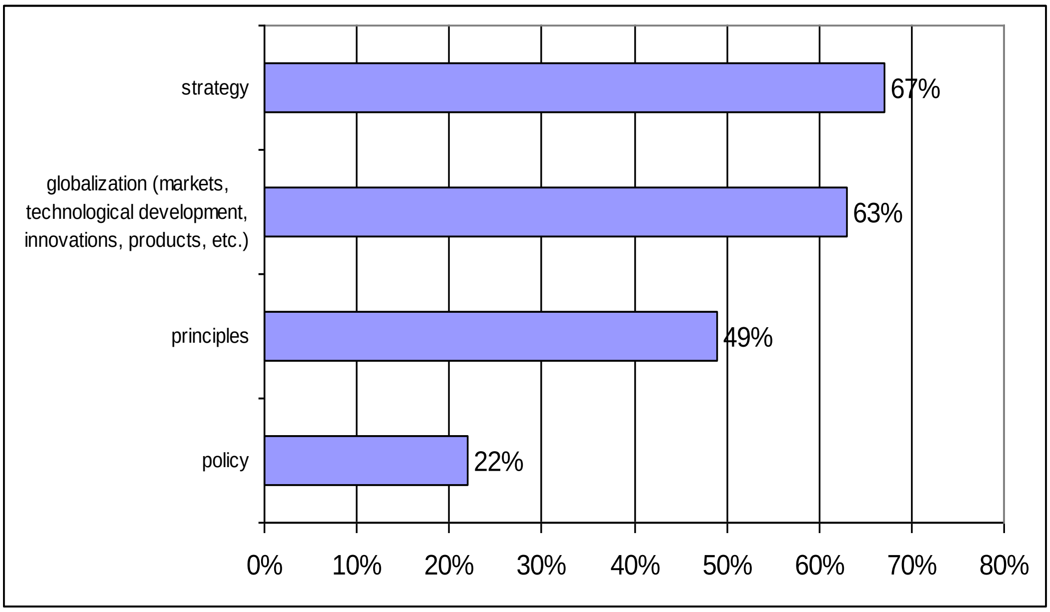

Fig. 16: Basic components of NIMA (more than one answer is possible)

3.3.3. Positioning main priorities of industrial management

For the most of adherents of NIMA the basic priority is the competitive policy[3] in conditions of liberalization and globalization (57%) (Fig. 17). Other competitive policy are “the regulatory function of state oriented towards final results” (41%) and “new corporate culture” (39%). “Social responsibility and ethics of organization” (28%) and “the regulative role of state differentiated in respect to advantages and disadvantages” (18%) have lower support. “Other” is pointed by 6%. “Association of industrial capital” is basic for NIMA according to only 2% of the interviewees.

[3] Competition is dependent on the growth in productiveness. On corporate level productiveness is determined by the strategy of the organization, management and the quality of work. In other words, competitiveness is linked directly to the economic freedom. And in disagreement of what is competitiveness, there is a consensus on what it is not. And it is not: abundance of natural resources, cheap labor, special subsidies and preferential conditions for society.

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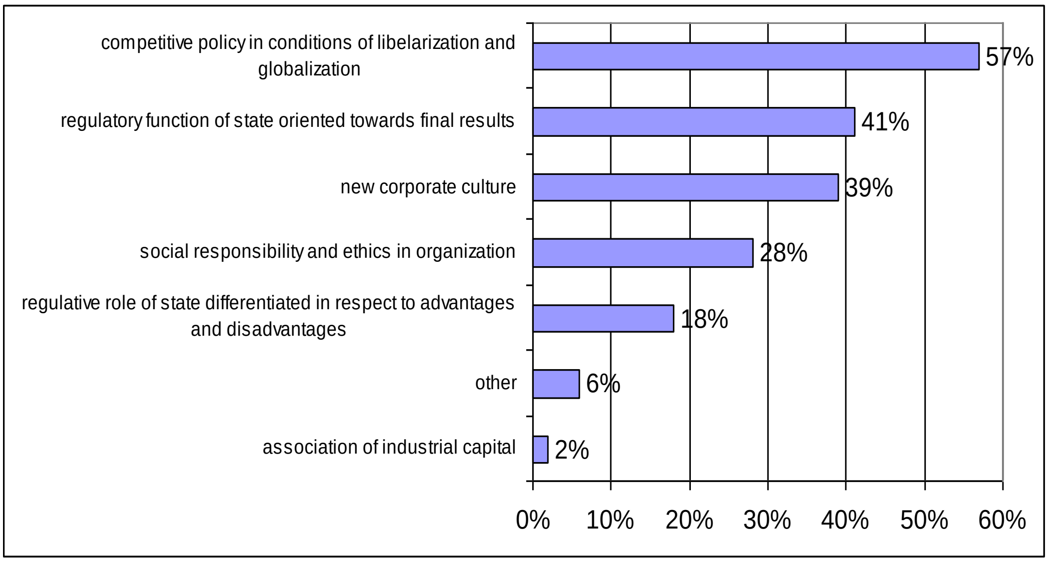

Fig. 17. Structure defining parameters for NIMA – distribution among the adherents of NIMA

The data show a high level of consensus on formulated challenges before industrial management in XXI century. Among the answers the partial or full disagreement varies between 11% and 15%. In that sense the agreement is between 85% and 89%. The biggest challenge before industrial management in XXI century according to the interviewees is "the management in the global environment"[4]. 52% point "completely agree", 38% - "agree", 10% - "disagree", among which only 1% are categorical in their opinion (Fig. 18). "Social responsibility and ethics of organization" and "new corporate culture" have similar percentages (88% each in the "agree" points). 12% in each do not agree. The opponents of the first statement are bigger percentage (8%) than the second (2%). 49% support the challenge of "entrepreneurship". It has the highest percentage of disagreement – 14%. Only 25% are fully convinced that "Career management" is a challenge before the industrial management, and only 2% state the opposite (Fig. 18).

[4] In new global environment in the scope of industrial management, industrial managers respectively, the fields that are most critical should be concerned. For the country under investigation those are: the real sector (especially small enterprises and self-employed), households with debts and peripheral municipalities. That means that they are touched in the greatest extend by the crisis in the economics (and not only the budget) and the labor markets and incomes.

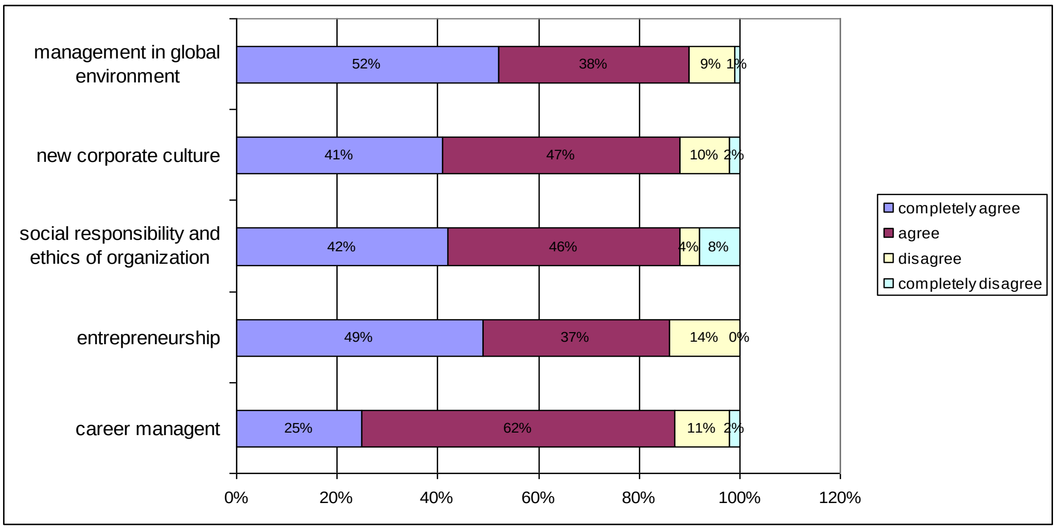

Fig. 18: Main challenges before industrial management in XXI century

The most anticipated problem in the process of functioning of the organizations in XXI century is “strengthening competition” (Fig. 19). Only 13% do not agree with that opinion, while only 4% of them are categorical. “The raise in the prices of resources” is a consensus problem - 86% with partial or full agreement. Among other expected obstacles, supported by over the half of the interviewed specialists, are “bank credits” and “globalization of business (73% each), as well as “unfair competition” (56%). There is embarrassment for “introduction of new forms of branch and international cooperation” (60% of the respondents). “The shortening of the life cycle of the products” is not a problem for 59%, the biggest percentage here is for those categorical in their opinion (31% state that it is completely non-applicable for their organizations). Looking ate “the corruption environment” and “difficulties in covering the costs for scientific, research and transfer activities in the period of commercialization” the optimists prevail and 59% (in both cases) do not expect those as forthcoming problems.

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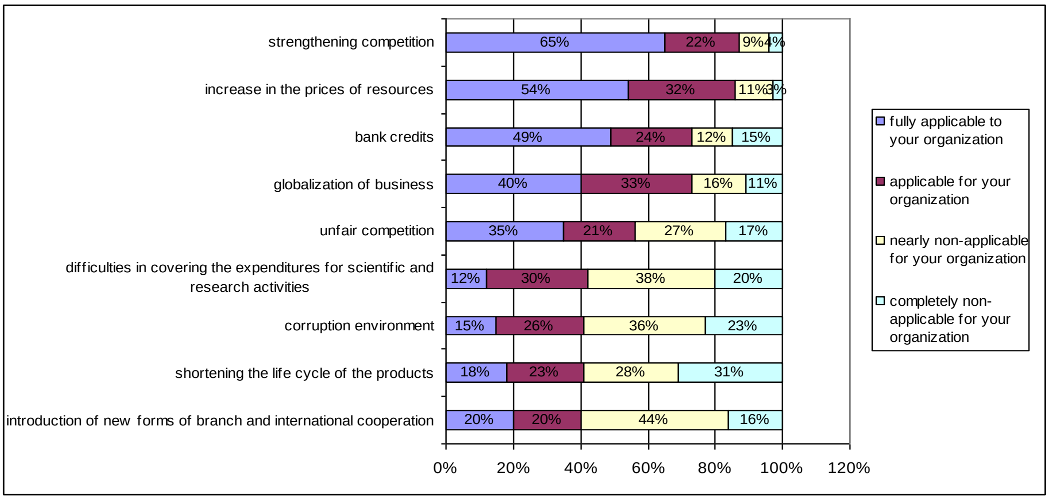

Fig. 19: Expected problems before industrial management in XXI century in respect to the effectiveness of organizations' functioning

3.3.4. Instruments for determining effectiveness of industrial management in organizations

There is no a universal technique in determining the effectiveness of industrial management in organizations. The polarization in opinions is mainly in two directions: "analysis of the economic effectiveness of organization" (54%) and "analysis of the financial profitableness" of the organization (50%) (Fig. 20). For 21% of the respondents "the analysis of the growth of the organization" is litmus of success. Only 4% point that they do not use techniques in determining the effectiveness of their own organization.

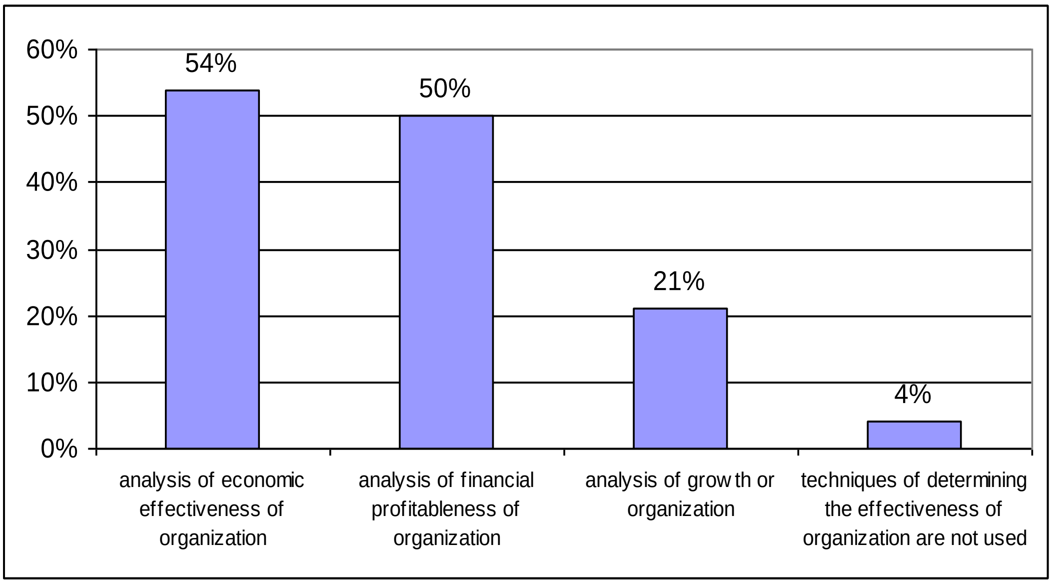

Fig. 20: Used techniques in determining the effectiveness of industrial management (more than one answer is possible)

4. Conclusions

Summarizing the results of the investigation, the following conclusions can be formulated:

1. For almost two of every three organizations the classical approach towards the industrial management is determining.

2. For contemporary industrial managers the most peculiar task is the management of the activity and the organization which could be achieved in the greatest extend by control. That could mean that namely in the control implementation the biggest difficulties could hide, on one hand, and on the other – it is underestimated at the current moment. Key parameters for the organizational activities are economic effectiveness and quality of production, labor and management.

3. Managers achieve better results when stay for longer periods in organizations passing consecutively hierarchical levels (the outstanding workers in industrial management are usually the management staff and technical specialists). Another positive feature is the work with a permanent team. Only for one of every ten managers high results are achieved in change of organization in searching for new challenges when alternating periods of overload and less engagement and frequent change of the team seeking the best collaborators. The success is available in development of professional career in the frames of one organization and with permanent team. The change of work and team are counter-indicative for most of the interviewed managers.

4. The peculiarities of the industrial management in the Republic of Bulgaria are connected to the rules which are imposed by a regulator in the face of the state. The specificity is the fact that the industrial management is put as a mechanism of functioning of organizations reflecting the phase of life cycle of the national economy. The increased informational asymmetry because of the lack of transparency in business or between inner and outer investors is not pointed as a peculiarity of industrial management because it collects only 1/10 of the answers of the interviewees.

5. The quality of work and the level of techniques and technology determine the level of productivity. Distribution and presentation have future in marketing of products and services. On the backstage are the consignation and franchising. The internationalization of business is possible when using active strategies for penetrating new markets.

6. The expert opinion is divided in respect to the necessity of the establishment of a new form of international management architecture (NIMA). For its adherents the basic are strategy and globalization (markets, technological development, innovations, products, etc.). The structure defining for that form is the competitive policy in conditions of liberalization and globalization. Other significant parameters are the regulative function of state orientated towards final results, and the new corporate culture.

7. The big challenge before the industrial management in XXI century is the management in contemporary global environment. In the foreground are the corporate social responsibility and ethics and new corporate culture in organizations. The expected problems in the process of functioning of organizations in XXI century is the strengthening in competition and raise in the prices of resources. Others are bank credits and globalization of business, as well as unfair competition.

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8. Regarding the techniques of determining the effectiveness of industrial management polarization in given opinions is noticed. It is mainly in two directions – analysis of economic effectiveness and of financial profitableness of organizations.

In conclusion, it can be stated that the confidence in the usefulness of the current research is supported by the contradictory processes of differentiation and integration. The character of both in the scientific knowledge of management predetermines the necessity of development of appropriate methodological concept of industrial management which to integrate the results of that empirical investigation, different analyses, statements and conclusions formulated in other scientific fields concerning the main business priorities of the Republic of Bulgaria in XXI century. Today, the following topics are closely connected to the industrial management: entrepreneurship, knowledge-based economy, network economy, industrial management in the new global environment, career management, corporate social responsibility and ethics and new corporate culture. All that is predetermined by the fact that the effective industrial manager analyzes the problems of management and then he/she solves them applying appropriate management theories.

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Social Innovation Role in Creating a Methodological Framework Adapted to Reality

Mariem Kchaich Ep Chedli[1], Teodora Bianca Floricel[2], Larisa Mihoreanu[3]

[1]PhD student, Bucharest University of Economic Studies, Romania, mariemkchaiech@gmail.com

[2]PhD student, The Bucharest University of Economic Studies, Romania, teo89_teo@yahoo.com

[3]PhD student, Larisa Mihoreanu Bucharest University of Economic Studies, Romania, lmihoreanu@yahoo.com

Abstract. *Innovation remains a complex concept that can't be analysed and researched by ignoring the definition and influences of all aspects and interactions which were identified in the innovation cycle. Consequently the paper initiate the development of a modern methodological framework to be applied for analysing business social innovations in its continuity to be used by companies to adapt their activities to the current market demands. These innovations are intended for running innovative company, with employees ready for new ideas.*

The research development has taken into analyse several approaches: the concept of social innovation, the manner of which social innovation can be analysed, focusing on methodological aspects and the third part presents the conclusions.

Given the present economic crises effects, its societal and social consequences in a reduced interest for applied social innovation, people tend to choose not making changes in their life and work despite new and innovative ideas; this can be taken as an approach for to avoiding risks and activity disruptions. As results our expectations merge within the idea that a complex society requires complex answers at all problems and personalised applications of any new theory or idea. Therefore the purpose of the paper is to propose concrete ideas of social innovation that can be easily put into practice.

Keywords: virtual social innovation, social development

JEL Codes: O35, O2

1. Introduction

The interest in the development of social innovation is the result of the necessity to create a better quality of activities for people and communities. The current environment is in a process of 'rediscovering of social innovation' understanding them as a vehicle creating social change. (Phills, Deiglmeier and Miller, 2008, p. 34).

One of most important definitions from the social innovation literature is from Max Weber who defined the relationship between the social order and innovation by the impact on social change of behaviors initially considered to be abnormal.

In the West, social innovation was more imposed in institutional field and, by extension, in economic and technological innovation field. (Matei, 2009)

For many years, developed countries are in a competition on innovation capacity and different ways of measuring it have been developed, but the capacity of innovation tends to refer only to the economic, technological and scientific field and not to social field.

Recently we are starting to see the importance given to the development of social innovation, supported to some extent by various programs.

An example of institutional development of social innovation is Great Britain which was one of the first states with a developed plan of policies supporting social innovation. (Matei, 2009)

In the existing literature there is still no precise definition of the term social innovation. To give a correct definition we start from the limited literature in this field to identify common elements and finally we create a synthetic formula, considering the fact that a successful social innovation should be culturally acceptable, economically sustainable and technologically feasible.

The aim of the article is to present the methodological framework for analysis of social innovation taking into account the changes that occur in today's society.

In the first part of the article the concept of social innovation is defined and explained, the second part presents an analysis of the concept shown with the methodological aspects, and the last part presents the conclusions.

2. Social innovation and its importance

To define social innovation it is necessary first to define the term of innovation. In the research literature there are different approaches to defining this concept.

One of the approaches propose to classify the concepts of innovations according to four dimensions (Carayannis, Gonzalez and Wetter, 2003):

The process of innovation (the way in which an innovation is developed, diffused and adopted);

The content of innovation (technical or social nature);

The context of innovation (the environment in which the innovation is emerges and is developed);

The impact of innovation (social or technological change that results from innovation).

In designing a clearer definition of social innovation, the major problem is related to low capacity in differentiating between some types of innovations (economic, organizational, technological, scientific, and social).

The natural language knows the general term of innovation, but its meaning is sanded for the particular cases of technical and scientific fields. The problem is that it produces a sense transfer from natural language to the new term of social innovation. This transfer was proved as an obstacle in the conceptualization of social innovation. (Zamfir, 2009)

Social innovation is about new ideas that work to address pressing unmet needs. We simply describe it as innovations that are both social in their ends and in their means.

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Social innovations are new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations. (Murray, Calulier-Grice and Mulgan, 2010)

The meaning can even go to the extend that social innovation responds to a social problem or social care, and for this it is known another definition that sais: "social innovation is a new solution to a social problem, solution that is more effective, efficient, sustainable and equitable than the existent solutions and for what the created value is increased primarily for society as a whole more than for private individuals." (Phills, Deiglmeier, 2008)

Social innovation should produce social, cultural, normative or regulatory change of society. (Heiskala, 2007) An innovation should introduce a substantial change in a particular field of activity.

To make a difference between economic innovation and social innovation, it is necessary to mention if the purpose of this innovation is to obtain or not a profit?

Even if the economic innovations produce an increase of well-being for individuals, quality of life, they are also created and distributed for profit. Most authors consider that the specific of social innovations consist in the fact that they are not created to obtain profit: social innovations consist in "innovative activities and services reasoned by order to meet a social need, run by organizations, companies or individuals whose main purpose is social and the profit is reinvested"; "it is different from innovation in business which are generally motivated by profit maximization and distributed by organizations that have profit primarily aimed". (Mulgan, 2006)

The social innovation is not produced in order to meet the needs of a specific individual or group or origin, but has an impact at the macro level. Social innovation creates value not only for direct consumer. (Leadbeater, 2008) For example, the fact that educational services have been improved by introducing new methods of organisation that have a long-term positive effect not only on students but on the entire community.

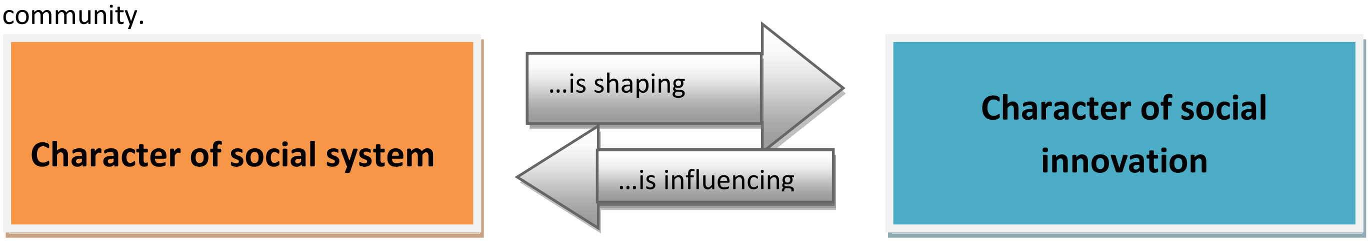

Fig. 1: Interrelation between social system and social innovation

As shown in the figure above, there is interdependence between the character of the social system and the character of social innovation.

It is essential to emphasize that the role of social innovations in community is two-fold: social innovations are shaped by social system (legal framework, actors involved in innovation development, etc.) and at the same time they are influencing the social system, as they have a purpose to change some aspects of the social system (Fig 1).

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3. Analysis of innovation in Romania

Romania has a weak position in the European ranking on the production, assimilation and dissemination of innovation measured by European Innovation Scoreboard. In this context, addressing the topic of social innovation at academic level gains major importance.

Social innovation in Romania is facing major deficits of culture and supportive cultural, legislative, organizational and political deficits for this point of view. (fig. 2)

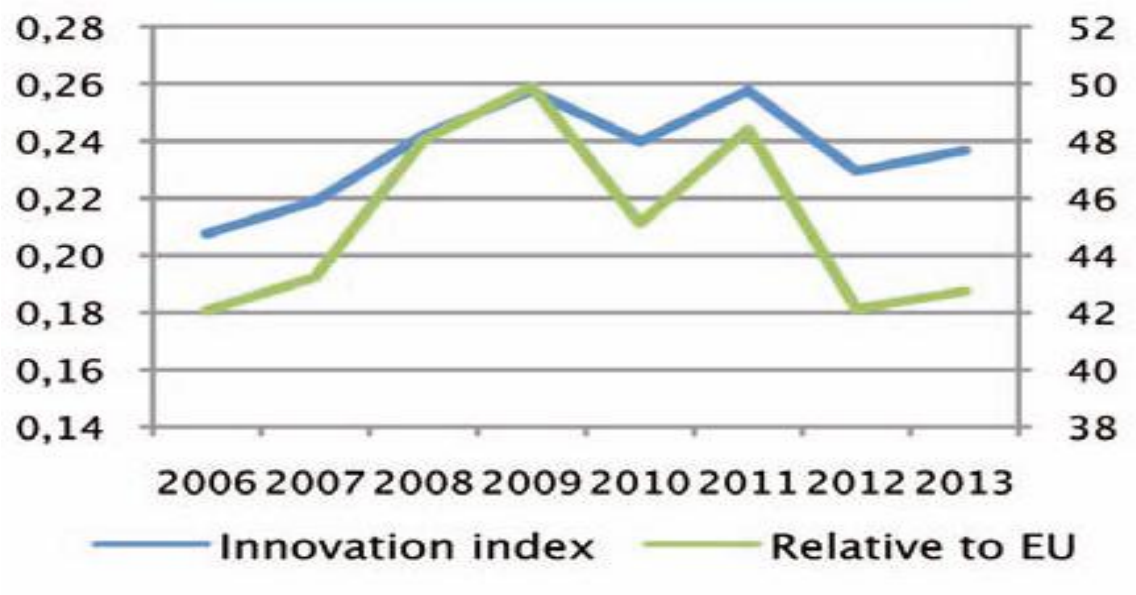

Fig.2: Innovation performance of Romania comparative with EU

The graph shows that Romania is a modest innovator. Innovation performance increased up until 2009 and it has fluctuated ever since. Relative performance to the EU has worsened from being close to 50% in 2009 to 43% in 2013. Romania is performing well below the average of the EU for almost all indicators. (Innovation Union Scoreboard 2014)

4. Conclusions

The concept of social innovation is broad and difficult to define. We can understand social innovation by examining at the same time the other types of innovation. According to methodological research, social innovation is understood as a sum of new ideas, new knowledge or new projects used in an original manner.

Nowadays, we are being confronted with a special need to develop new methods of social innovation, and for that we have to use a plan to stimulate them.

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Open source MySQL Browser for Open Innovation

Lecturer Radu Bucea-Manea-Tonis, PhD [1]

[1] mysqlbrowser.codeplex.com

Abstract. *Our purpose is to cross-compile MySQL driver source code for Linux on Windows architecture using a tool chain in order to build a neutral valid graphic interface on 32 bits. Once achieving this goal we could say that every possible Open source application can be built and run on Windows with maximum efficiency concerning costs and resource. This browser is an example of open innovation because its source code is free for anybody willing to develop new software apps for business and uses only Open source tools.*

Keywords: MySQL, GCC, MinGW, GTK+, Open innovation

JEL Codes: M15

Open source methodology is gaining popularity in the business processes owned by modern companies. The benefits derive from its free availability, low-cost implementation and rapid business value growth. Open source business model inspires small companies that have not enough funds to invest in technology. Even big companies like IBM base their development strategies on Open source in order to obtain feedback from every specialist around the World and to facilitate the process of open innovation. The growing success of this paradigm explains the author's decision to develop MySQL Browser.

1. MySQL API

The MySQL API[2] consists of wrapping classes to Native API where the most important data structure is **st_mysql_res** which points the current row and some metadata, and contains the following data fields:

Table 1. ST_MYSQL_RES Struct

my_ulonglong	row_count
MYSQL_FIELD *	fields
MYSQL_DATA *	data
MYSQL_ROWS *	data_cursor
unsigned long *	lengths
MYSQL *	handle
MEM_ROOT	field_alloc
unsigned int	field_count
unsigned int	current_field
MYSQL_ROW	row

MYSQL_ROW	current_row
my_bool	eof
my_bool	unbuffered_fetch_cancelled
const struct st_mysql_methods *	methods

Accessing rows is done iteratively, every row being linked with the next one through the following **st_mysql_rows** structure:

Table 2. ST_MYSQL_ROWS Struct

st_mysql_rows *	next
MYSQL_ROW	data
unsigned long	length

The standard method to get records from database is calling the **next()** method of the RecordSet object, like in the following example:

```
res = stmt->executeQuery(str);
if(res->next())
{
if(strncmp("char",res->getString(1).c_str(),4)==0)
        TypeArr[i]=G_TYPE_STRING;
…
}
```

This method translates itself into the following instruction: **row = result->fetch_row(),** where **result** is a **NativeResultsetWrapper** instance and row has the **MYSQL_ROW** type, structure implemented as an array of counted byte strings.

After calling the **executeQuery()** method upon a **NativeStatementWrapper** object, the **get_resultset()** method is called and assigns the **use_result()/store_result()** return value - called upon a **NativeConnectionWrapper** proxy object - to a **result** instance. **store_result()** translates into a lower level method to obtain a **Recordset** by executing the following line: **::st_mysql_res * raw= api->store_result(mysql),** where the **st_mysql_res** object is initialized.

2. Building libmysqlcppconn library from scratch

After install, mingw toolchain[3] will contain GCC compiler, linker and make tools. CMake[4] is launched to generate a valid Makefile, after extracting MySQL driver archive into a folder. It will ask for

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valid paths to gcc and g++ compilers, linker and MySQL Server include and lib folders. For higher versions of mysql driver, it will ask for Boost library path but unfortunately this is poorly compatible with our shipped version of GCC compiler(4.6.2).

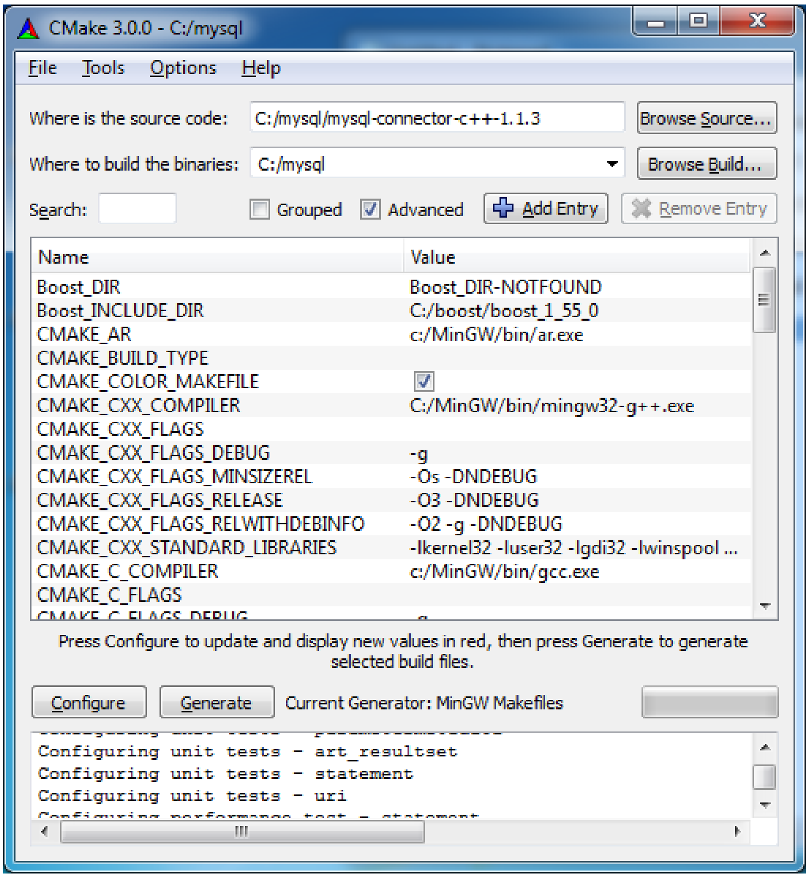

Fig. 1: CMake configure window

Make command is launched to build the project and raised errors will be treated appropriately. There are two types of errors encountered, one type concerning data definitions redundancy in header files (macro's, functions, and managed data types), and another, dealing with templates occurrences in extern C context. If the build succeeds, both static (libmysqlcppconn.dll.a) and dynamic (libmysqlcppconn.dll) libraries are created.

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3. Creating a GUI for MySQL driver

GTK+[5] is a multi-platform toolkit for creating graphical user interfaces. Offering a complete set of widgets in combination with the Glade GUI builder, it provides an effective method of rapid application development. We create a My_GUI class with the methods described in the class diagram below:

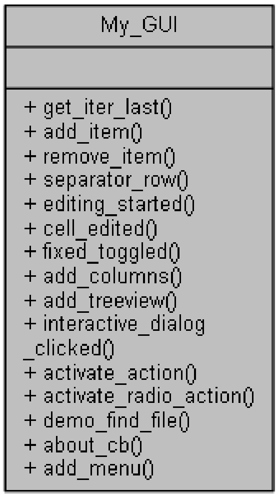

Fig. 2: My_GUI Class diagram

After calling the gtk_init() method that initializes the library for use, sets up default signal handlers, and checks the arguments passed to the application on the command line, we create the main window, fallowing the steps:

```
window = gtk_window_new (GTK_WINDOW_TOPLEVEL);
gtk_window_set_title (GTK_WINDOW (window), "MySQLBrowser");

gtk_container_set_border_width (GTK_CONTAINER (window), 5);
```

then add the window to the container and set its size:

```
gtk_container_add (GTK_CONTAINER (window), vbox);

gtk_window_set_default_size (GTK_WINDOW (window), 320, 200);
```

We call then the gtk_main() that runs the main loop. It will not return until **gtk_main_quit**() is called. For showing the results in a grid form we use a tree view **GtkWidget** that connects to the real data through a GtkTreeModel object initialized before by calling **create_items_model** method. After adding the menu bar and a couple of modal dialog windows, we get the next picture:

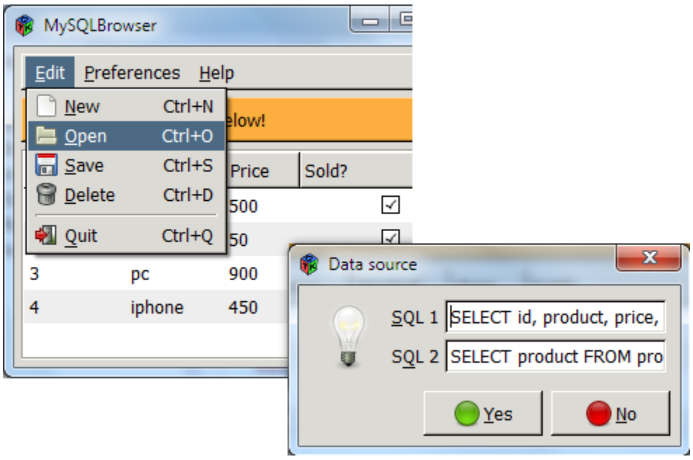

Fig. 3: MySQL Browser for Windows

The overall dependencies graph of the main classes (MySQL and MyGUI) and the environment types is shown below:

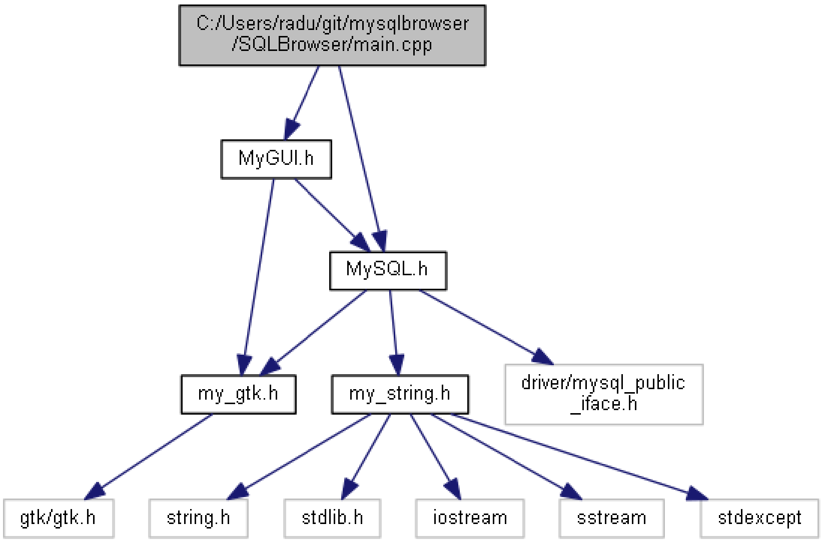

Fig. 4: Dependencies graph generated with Doxygen[7]

It is worth mentioning that GTK libs use UTF-8 international encoding standard, resulting back and forth conversions between back-end (MySQL Server) and front-end (GTK interface).

The system requirements for development are as follows:

- MySQL driver source code (ex. mysql-connector-c++-1.1.3.tar.gz)
- GTK+ project (ex. gtk+-bundle_2.24.10-20120208_win32.zip)
- mingw toolchain (ex. mingw-get-inst-20120426.exe)

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- Boost C++libraries[6] (ex. boost_1_55_0.zip)
- Makefile CMake builder(ex. cmake-2.8.11.2-win32-x86.exe)

Most of the .dll's are easy to find in MinGW\bin and GTK+\bin folders. Others are free to download (libmysql.dll) in case some have limited privileges on the computer (and have XAMPP installed).

4. Conclusions

This paper proves the effectiveness of complementary Open source tools in developing useful apps to improve business value and competitiveness. The project have been implemented and shared on the Microsoft Codeplex Open source website [1] where is browsed and downloaded by numerous developers.

5. References

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[2] C API Data Structures, http://dev.mysql.com/doc/refman/5.0/en/c-api-data-structures.html
[3] Minimalist GNU for Windows(MinGW), http://www.mingw.org/
[4] CMake cross-platform open-source build system, http://www.cmake.org/
[5] GTK+ the GIMP Toolkit, http://www.gtk.org/
[6] Boost C++libraries, http://www.boost.org/
[7] Doxygen Generate documentation from source code, http://www.stack.nl/~dimitri/doxygen/

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Few aspects regarding the building of the rule of law

Lecturer Magureanu Alexandru Florin, PhD

Spiru Haret University, Faculty of Juridical and Administrative Sciences Brasov
magureanu_alexandru_1982@yahoo.com

Abstract. *Delegating the sovereignty from the citizens to the Government is necessary, to a certain degree, in order to ensure the efficiency of the constitution and the separation of powers, as well as the process of lawmaking. However the complex structure that we now call a "state" and that already seems to have reached its limitations is often perceived as a cold, impersonal structure, in which citizens are becoming only an insignificant part, an interchangeable wheel in a grand design. Thus the decision tends to become more distant from the citizens, than it was in the Greek democracy for example. The new means of communication, especially the Internet, give the citizen the possibility to be closer to the decisions taken by the legislator. The building of a "virtual agora" in which citizens are asked to participate directly to their own governing seems an achievable dream. Main difficulties towards such an ambitious goal are no longer of a technological nature, but of transforming the traditional law making process, the somehow rigid essential characteristics that the rule of law must have, with the direct exercise of sovereignty, by the citizens, if not in all matters, at least at a local, administrative level.*

Keywords: legal certainty, legitimate expectations, negotiation, law

JEL Codes: K19

1. Introduction

New means of communication and the new technological achievements are not changing only the way we live, but also the way we are governed, the legitimate expectations that the citizens have towards governing and especially towards the rule of law, in the states governed by such rules and not by abusive decisions. It is certain that the citizens will demand to be more involved in all processes concerning them, especially in the law-making process. The governed are now closer to the decisions taken by the public authorities. The future can bring a more effective of informing the citizens about decisions that will affect their lives and also, in a certain extent, the taking of decisions directly, by the citizens, a direct exercise of sovereignty. It remains to be seen if such a "virtual *agora*" can be achieved. It is certain however that, what we could call a *live* constitution, although appealing as a principle, can present many weaknesses, especially the danger of taking important decisions in the spur of the moment. Such decisions will evidently lack the necessary objectivism, a certain distancing that is necessary for any law and the more so for a constitution. The constitution of a state or group of states consecrates principles that are fundamental, cultural, economic, social and juridical values. Acknowledging the fact that the power of the constitution originates from the people, which chooses to delegate such power, for a better administration, we must also acknowledge that the fundamental values defended by the constitution are the essential values of that nation or group of nations, thus becoming the duty of that state or group of states the important task of defending and promoting them. Such values cannot always be negotiated, and certainly cannot be changed overnight, as endurance over time can help creating the necessary objectivity and trust in those values. The procedures of modifying a Constitution are not only intricate but also limited, in the sense that there are certain barriers that prevent the enactment of new constitutional provisions. For example, a new provision could not be contrary to fundamental rights and freedoms recognized and guaranteed by international treaties. Also, in a democratic law, the content of a constitution is strongly influenced and limited by the general principles of law. Also, we must take into consideration the fact that both human rights and the increasing influence of international law over national law systems are also having an important contribution in the creation and the shaping of the rule of law.

2. Essential characteristics of the rule of law

2.1. The rule of law must assume the application of same standards.

The legal norm must apply same standards, in a similar manner, for all the situations that may occur in real life and for all categories of peoples, in other words, the rule of law must be general, must have an impersonal character and must be opposable "*ergaomnes*". An individual will tend to obey a rule of law when he will be convinced that other members of the society obey that norm. Repeated violations of the law, and especially violations that are not punished, by some individuals, will make those that obey that law to fill wronged. A law that would imply different standards, unjustified use o different criteria, based on personal qualities (such as social status, wealth, gender, age etc.), would be the contrary of any ideals that a democratic state should have.

The final goal of any law is to maintain the social order and to promote (as law cannot be considered as merely an arbiter or a punisher but also a catalyst in the development of certain social values) and protect a social value. The laws must adopt only after rigorous investigations, economic, sociological and psychological studies, after serious scientific analysis in the area where they will be applied, and not to the advantage of certain individuals or groups of interests.

2.2. The rule of law must be written, public and clear

According to Hegel [1], to hang the laws, as Dimysius the Tirant, so high that no citizen could read them or to bury them in the complicated mechanism of justice, in erudite books, collections of decisions and so on and more than that, in a foreign language, so that the knowledge of the law can only be accessible to the few that trained in this profession is all but one and the same injustice.

No one can invoke not knowing the law as an excuse to elude a rule of law. There is thus the presumption that all the recipients of a law have knowledge of that particular rule and that they understand it, and in order for this to happen it is necessary that a rule of law is formulated in a clear, obvious fashion, with a non-ambiguous content, that it contains clear terms that can be understood by anyone. We can identify a principle of law, related to the general principle of legality, the principle according to which "no one can invoke not knowing the law as an excuse for breaking it" (*nemocenseturignorarelegem*). As a result of this principle, there is an absolute presumption that all citizens know what the law stipulates, starting at the date when a certain rule of law enters into force. A law becomes abiding, in the E. U. (and in most of the civilized world), only after it appears in an official publication. In Romania this publication is called The Official Monitor and a law entries into force in 3 days after its publication or at a later date stipulated in the law, as the legislator must take into consideration a certain period of time, in some cases, considering that many of the rules of law cannot become realities over night. At a European level the publication is The Official Journal of the European Union, published in the language of every member state. Every person should have the possibility to access directly and free of any cost these official publications.

In order for a rule of law to be clearly determined, there must be a general consensus, between the legislator and the civil society, regarding the expressions, the terms that it is using. The clarity of a law does not refer only to the objectives that the rule is trying to achieve but also to the meaning of the words that are chosen and also to the meaning that those expressions have for the community were the law will be applied.

The conceptualization of the provisions of the law, by those that must comply with them must be in consensus with the real will of the legislator. In the same degree, the legislator must choose the expressions with responsibility and care, avoiding, as often as possible the use of terms that are of a very specialized, technical nature.

The confusion, the lack of understanding of the real meaning of a rule of law may have catastrophic effects. The lack of clarity can lead not only to mistaken interpretations but also, to certain „blockages" or at least important meltdowns in the process of applying the law. Lack of clarity can also lead to what I would call a "legal inertia" a situation where trust in the rule of law nearly disappears and it is replaced by the trust in other institutions (as the church for example), or in customary law.

The hierarchy of the rules of law, the interpretation as well as the judicial system, meaning the judges that apply the law are elements that can make a decisive difference in the streamlining of the legal system.

2.3. The law must be the expression of a certainty

Legal certainty surmises that the individual knows or at least has the possibility to know which will be the consequences of breaching a certain law. Legal certainty surmises the premise that the individual knows the law and can act accordingly. The punishment for a crime must be stipulated clearly by the law. Even if, for example, the citizens of a country don`t know the exact quantum of the punishments stipulated in a Criminal Code, they have the possibility to learn this, if the law is public and easily accessible. The

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punishment applies only when the author had the freedom of will and of action. So, the person that commits a crime is aware of the existence of the rule of law, of his deed and of the consequences (or he should have been aware). Also he is aware of the punishment that he is likely to receive. Quite often the fear of punishment is what stops someone to commit a crime. For this purpose, but also as an individual right, the punishment must be known or foreseeable. According to Takis Tridimas [2], the common knowledge of the laws and of the customs creates expectations related to the consequences and the reactions chained to the actions that take the form of a "multidimensional conceptual map", dynamic and relativist of the possible forms of relations.

The concept of legal certainty is in a close relation with the concept of legitimate expectations of the citizens, expectations that they have from the rule of law. In fact, these concepts are so closely connected that the European Court of Justice does not make a clear distinction between them. The jurisprudence from France and Germany recognize, in a large degree, the notion of "legitimate expectations" (although in my opinion "legitimate expectation" has a larger understanding –for example the expectation that the fundamental rights and freedoms are respected, or to have access to education, decent healthcare etc. are part of the large concept we call "legitimate expectations).

Another factor that essentially contributes to the legal certainty is the force of *res iudicata,* which surmises that it is forbidden to start a new trial when there is a definitive decision, in a case, between the same persons, with the same object, if there are no new evidences. A court decision that is definitive, that cannot be appealed against is considered to reflect the true. *Res iudicata* is an essential condition for the fulfilment of justice and to ensure a climate of certainty.

Finally, another factor that contributes to the legal certainty is the interdiction to use analogy when imposing a punishment. According to E.C.H.R. [3] (interpreting the art. 7 of the European Convention on human rights), the principle of legality also surmises the interdiction that the law should be applied through analogy, through extended interpretation of a case, at the expense of the defendant.

2.4. The law must provide only for the future

While a law is in force, it has a continuous application, without interruption. A law is in force until the moment of its abrogation. No matter how serious, how odious a deed may be, it cannot be punished, as long as there is no law to incriminate it. The principle of non-retroactivity is formulated in all the democratic constitutions [for example art. 15 of the Romanian Constitution which stipulates that the law provides only for the future, excepting the more favorable criminal law. Art. 7, para. (1) of the Constitution states that no one can be condemned for an action or an omission that, at the time when it was committed, was not considered a crime, according to national or international law.]. The principle that we analyze is essential in certain branches of law, such as criminal law.

A new law can only regulate legal relations that are born while it is has entered into force. In conclusion, the new law will not regulate the deeds that were committed before its entry into force. The justification of this principle resides in the fact that the new norm, that incriminates the deed, was not known (not even foreseeable) by the offender. It would be irrational to punish someone for a an action or an omission that was permitted by the old law (*nullumcrimen, nullapoena sine legepraevia*). The principle has appeared as a political claim against the Feudal regime, and later it has gained a prominent position in the Declaration of the Rights of Man and of the Citizen (1789).

The non-retroactivity of the law is a way of protecting fundamental rights and freedoms against the arbitrary of the state, a guarantee that contributes to the forming of the legal certainty. There are only some situations, strictly determined, in which the provisions of the law may be applied retroactively.

2.5. The rule of law must use criteria of differentiation of the human beings that are accepted by the society and that do not violate the fundamental rights and freedoms

This criterion becomes applicable especially when a rule of law uses different degrees of generality, when it circumstantiates the type of recipients.

The rule of law differentiates, almost always, according to different qualities of the persons. For example the rule of law requests a certain age to vote, to become legal reliable and so on. In some situations, the law protects certain categories of persons. This way they gain some advantages. A differentiate treatment that the law applies doesn`t necessary mean a breach of the fundamental rights, on the contrary, applying the same treatment in all situations that may occur can be considered a type of injustice. But it would be an inacceptable criterion of differentiation that only some of the pregnant women or only some of the minors would gain an advantage, as a result of a legal provision. Differentiated treatment for a group o people (minors, persons with disabilities etc.) is a necessity, inside certain boundaries, as long as this treatment has a logical, objective justification, and as long as it surmises an identical treatment, in similar situations, inside a group of people.

2.6. The rule of law must be compulsory

Disregarding the branch of law that a norm belongs too, the law has, since the moment it entries into force, a mandatory character. The power of the state legitimates and guarantees the application of the law, assuming the task to punish any relevant violation.

Although the primary purpose of the law is not to punish but to protect, the punishment is, sadly, a necessity for any type of government (excepting perhaps an ideal one –in the words of Saint Augustine – “love and do what you want”). Not punishing crimes that are incriminated by law will inevitably lead to a weakened authority.

As they are destined to impose a law order in a society, the rules of law must be compulsory (or at least most of them), otherwise there would not be a certainty that the legislator will be able to impose social order. Although some of the rules of law contain permissive provisions, most of the norms are compulsory [4].

2.7. The rule of law must be an act emanating from a competent authority

According to the principle of legality, a rule of law can be promulgated only by the competent organisms of the state. The laws have a high degree of impersonality and, we could say that they may be compared to a computer program that "sees" only in the limits of the parameters that it was designed to. Still there are some factors that condition the laws that give them a humane dimension, such as the principle of respecting human rights or, in the case of applying the law, the persons called to fulfil this difficult task, must apply the law considering the particularities of every case.

The fact that only the competent authorities can promulgate laws is an essential condition, in order to ensure the objectivity of the laws and also to essentially contribute to legal certainty. The elaboration of the law must be based on rigorous scientific criteria. Being such a complex process, the elaboration of normative acts must seek a multidisciplinary support.

2.8. The law must be accepted and its utility must be recognized by the society where it is applied

Although this criterion is not indissolubly linked with the legal validity of a norm, the law will not be efficient, will not fulfil its purpose unless the value that it protects will be recognized by the individuals that are forced to obey it. The idea of law unaccompanied by the value that it protects is not strong enough to ensure the efficiency of the legal norm. The notion of law is far too abstract to ensure its protection, and we even dare say validity, if it doesn`t consecrate an essential value, or if it doesn`t play a part, no matter how small in the protection or promotion even of such a value. The internalization of the legal provisions is a sine qua non condition for any rule of law, as the compliance is a key element for the rule of law. When there is a large opposition to a law, this raises serious question marks regarding the purpose of that law, of the reason behind the provisions of the legal norm. Repeatedly violating a rule of law can be a relevant hint regarding the efficiency of the law.

2.9. The law must contain general and impersonal provisions

The conduct prescribed by a law is meant to be applied to an unlimited number of cases and persons [5]. By prescribing conducts that establish rights and obligations to the participants at the legal life, in a generic manner, the law becomes an abstract standard, depending on which the conduct of a concrete subject is considered lawful or unlawful.

The rule of law has the calling of being applied to an infinite number of real life situations, in the area that it regulates. The sanction that follows after the violation of the legal provisions can be applied to any person that through his actions or inactions enters in a conflict with the legal provisions. The generality that the law has refers at the totality of persons that fall under the provisions of the law, as well as to the totality of situations that the rule of law can be applied to. Only the generality of the legal norm can confer a unit of equal measurement, and unique criterion in appreciating the conduct of the individuals, from a point of view of conformation with the requirements of the law [6].

The norms must have an impersonal character, even if there are laws that target a certain category of persons (for example public servants). When it applies to a category of persons, the rule of law doesn`t achieve this considering the personal features of the subjects, but by considering the function that the person has, and thus entering under the provisions of that norm.

2.10. The rule of law must be consistent with constitutional provisions, with some international acts and with the general principles of law

A strong connection exists between the legal norms. The norms form branches of law, which at their turn give birth to a law system. This system, although composed by different laws must have an unitary, coherent structure. When enacting a law, the legislator must take into account all these correlations, must compute all the implications that the new law may have, the subsequent legal modifications, the domains affected because of the change, as well as the possible conflicts that may emerge [7].

The general principles of law have, also, an essential role in the elaboration and in the process of applying the rules of law. The general principles confer coherence and, at the same time the elasticity that is necessary to any system of law.

3. Acknowledgements

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Consumer attitude and behavior towards Bio-products in Slovak Republic

Ing. Jana Chovancová PhD[1], Ing. Emília Huttmanová PhD[2]

[1] University of Prešov in Prešov, Faculty of Management, Department of environmental management, 17. novembra 1, 08001 Prešov
jana.chovancova@unipo.sk

[2] University of Prešov in Prešov, Faculty of Management, Department of environmental management, 17. novembra 1, 08001 Prešov
emila.huttmanova@unipo.sk

Abstract. *Bio-product market is very challenging and developing rapidly. Consumers have raised great interest in healthy and tasty diet with high nutritional compounds, confidence in food safety, environmental and animal welfare concern and also sustainability. The aim of this paper is to analyze consumer attitude and behavior as well as the factors influencing purchasing behavior when deciding to buy bio-products or their substitutes. The essential part of the article presents the partial results of the research, which was directed to consumers buying bio-products in Slovakia.*

Keywords: consumer attitude, purchasing behaviour, bio products, sustainability.

JEL Codes: Q01, Q57

1. Introduction

In recent years we have witnessed a variety of adverse changes to the environment by increasing production in the agricultural sector using excessive amounts of fertilizers and chemicals. Environmental problems and related health issues leaded in the 80s of last century to preference of alternative/ environmental management systems, through which the negative impacts on the environment was minimized, but they also served as a basis for creating integrated, humane and both economically and environmentally sustainable agricultural production system.

Health concerns and many scandals accompanied food production and products in the last few years trigged the attention of consumers towards bio-products. In the society is now formed an increasing consumer group for which quality is more than just a low price. Also the area of land farmed organically in Slovakia as well as other European countries increased significantly. In this way consumers have great opportunity to chance current trends in development of agriculture and food industry via their interest, preference and demand of bio-products.

Despite increasing awareness and growing demand for bio-products, Slovak market is taking off rather slowly. Presented paper is focused on assessment of consumers' awareness of bio-products as well as on factors influencing their behavior when purchasing bio-products. Based on information gathered through a questionnaire the measures that would increase awareness and consequently the interest of Slovak consumers of these products were outlined.

2. Ecological farming in Slovakia

Halberg (2006) defines ecological or organic agriculture as management system which promotes and enhances agro-ecosystem hygiene, including biodiversity, biological cycles and soil biological activity. Emphasizes the use of economic practices favouring corporate inputs, uses environmentally friendly methods of agronomy, biological and mechanical methods, as opposed to synthetic substances; in livestock farming, emphasis on animal welfare, care to the overall harmony of agro-ecosystem and its biodiversity and favours renewable resources and recycling materials. Organic farming is consistent with the principle of sustainable development of agriculture, and performs not only the production function, but especially non-productive environmental protection and sustainability of country.

Development of agricultural land in Slovakia shows increased interest in organic agriculture. In 2012, the number of hectares farmed organically almost tripled in comparison with 2000 and reached the level of 168 thousand hectares, representing 8.75% of the whole agricultural land in Slovakia. In 2013 there were 448 registered operators in the system of organic farming. (Central Controlling and Testing Institute in Agriculture, 2013).

3. Consumer attitude and behaviour

Consumer behaviour reflects the variety of consumer decisions regarding the needs, activities, people's experiences, opinions and ideas, and ultimately the properties of products through personal choice (Hoyer and Macinnis 2010).

Kretter (2005) states that “the need of a product is the decisive factor in the purchase of the product and the need reflects the motives which stimulate the buyer”. This can be applied to bio-products, too.

The same author defines the predominant motive for their purchase:

- protection of the environnent,
- health reasons,
- healthy life style,
- trying new trend in the diet,

- promotion of organique farming,
- less or no chemical substances used in manufacturing,
- better taste and quality.

According to Blair (2012) a key motive for buying organic products is their health safety. Author includes other factors such as the perception of food quality, taste, consistence, as well as nutritional value. Finally, the author adds the factors of humane treatment of animals and environmental sustainability of production processes.

Lieskovská (2012), on the other hand, identifies barriers, which also influence the behaviour of consumers of organic food and considers them as a problem when purchasing bio-products. These barriers are:

- qualitative barrier - some bio-products are characterized by unusual taste, odor or appearance,
- price barrier - is among the most important factors; high price discourages consumers,
- situational barrier - usually some bio-products are not available in all places,
- habit barrier - consumers are accustomed to buying everything under one roof, they do not like searching for other stores where they can buy bio-products,
- motivational barrier - a real lack of interest in bio-products and the environment,
- Information barriers - arise if the consumer has little knowledge about the benefits of bio-products,
- Barrier of trust - deficit of information or negative previous experience of bio-products causes mistrust of consumers.

4. Research

The goal of the research was to analyse tendencies in attitude and buying behaviour of customers as well as factors influencing their behaviour when buying bio products.

4.1. The research methodology and research sample

To achieve the main objective the following research methods were used:

- Analysis of secondary sources, such as a scientific literature and research articles and surveys published in domestic and foreign journals and proceedings relating to issues of bio-products. In addition to these sources of information the relevant websites and legislative documents were examined.
- Performing a questionnaire survey.
- Using the method of comparison, induction and deduction in information processing.

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The questionnaire survey was performed on a sample of 312 respondents. We contacted various categories of people, whether in terms of age, gender and economic issues such as monthly income. Respondents were anonymous and they responded questionnaire via electronic form, as well as a printed form. The survey was conducted in February and March 2014 and the results of this survey were processed in April 2014.

4.2. Results and interpretation of data

The questionnaire begins with some demographic questions (age, gender, number of people in the household, education level, occupation status and income questions) for statistical analysis. The next part of questionnaire is focused on consumers´ awareness of bio-products. Survey has showed that 281 (90 %) respondents are aware of bio-products and only 31 (10 %) does not know what bio-products are. Respondents mostly consider as bio- products “products of organic farming, which do not contain chemical compounds” or “are not produced with the help of synthetic fertilizers.”

From the group of respondents which reported that they are informed about bio-products, only 82 (29 %) answered that they buy this products. 129 respondents (46%) stated that they purchase bio-products occasionally and 70 respondents stated that they never buy bio-products, which represents 25 %.

This indicates quite big difference between awareness of bio-products and their real buying. Pickett – Baker, Ozaki (2008) refer to it as Ethical Purchasing Gap. It confirms a presumption that despite of general awareness of health or environmental issues it does not significantly shift the buying behaviour of consumers.

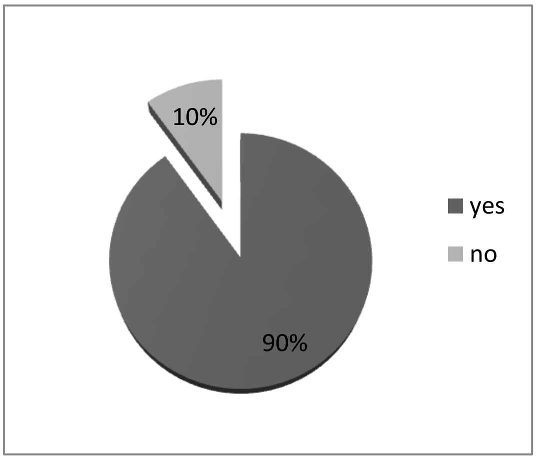

Fig. 1: Awareness of bio-products

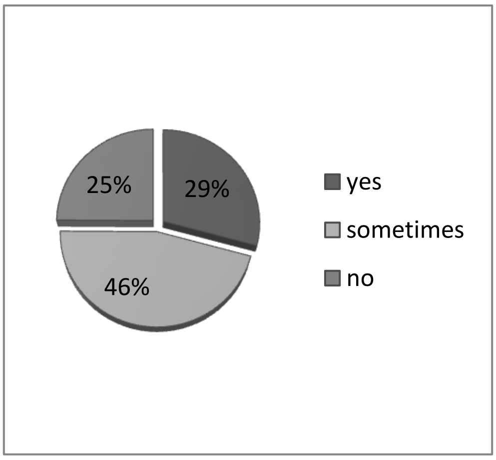

Fig. 2: Buyng bio-products

Consumers of bio-products can be influenced by many factors. The attitude measurement question was directed to respondents using 5 point Likert scale from “not important at all” to “strongly important” focused to measure, which factor influence attitude towards buying bio-products. Results can be seen on figure 3.

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Taste and appearance – eating tasty food is a general motive for everybody to satisfy our needs. Most bio-product consumers think that these products taste more natural, intense and rich in flavour. Slovak bio-product consumers are mostly affected by the taste of the organic products, as it is shown in the graph. Also western European studies showed that taste is one of the main motives for buying bio-products. (Hofmann, 2006)

Price – bio-product price differences are ranging from 40 to 450 % when compared to conventional products and usually price remain the major factor influencing the people choice. Especially in developing markets in Eastern Europe, bio-product prices can be really high that only high income class can be able to purchase them. Results on our survey showed that for Slovak consumers the price is in the second place as a factor influencing bio-product purchasing.

Availability – for most consumers to go shopping nearby the house become a routine work and a way of time and money saving. Even if they want to buy bio-products, they cannot reach the products in daily life. As is evident from the graph, under the criteria of availability of organic products on the market, most respondents did not have a strong opinion and availability as a criterion is not considered as the most important in purchasing decisions on buying bio-products.

Environmental protection – rising concerns about environment and resources are motives for majority of bio-products consumers but not the main or strong reason. In our survey this factor reached the fourth place.

Promotion – the least important factor influencing consumers when buying bio-products is promotion. We should state that bio-products are not promoted very often in Slovakia. Slovak consumers also have a problem with eco-labels recognition.

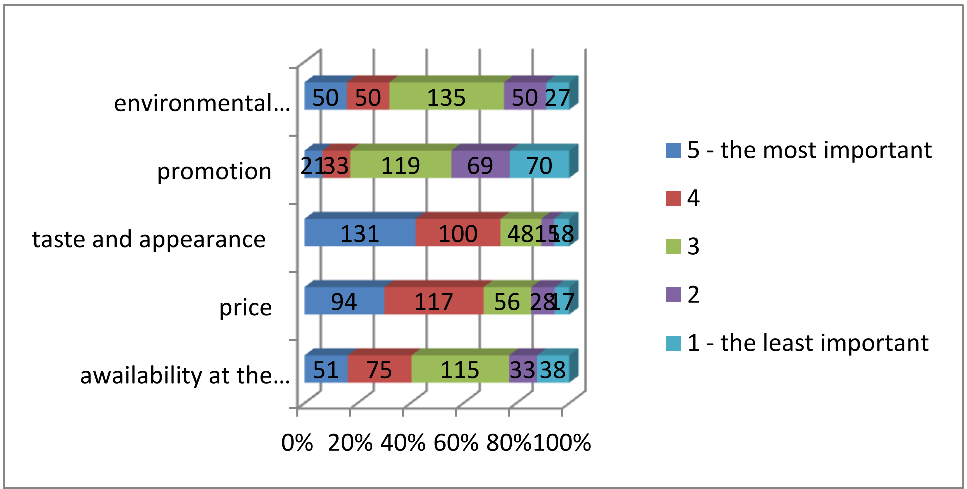

Fig. 3: Factors influencing consumers when buying bio-products

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e-mail: office_jedep@spiruharet.ro

The last question on our survey monitored the opinions of consumers how could be marketability of bio-products improved. Respondents could choose more answers. The most of them suggested decreasing the prices of bio-products. Other options according to respondents would be better availability, more rational life style of Slovaks and increased consumer awareness. In the last place consumers would appreciate wider range of goods.

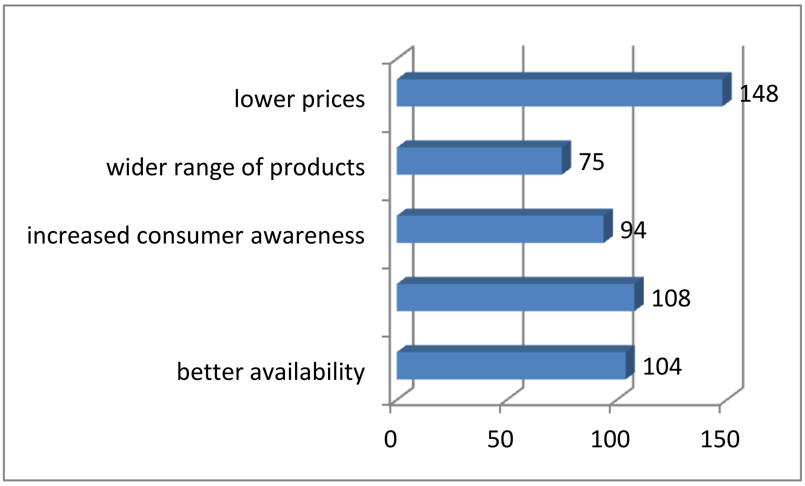

Fig. 4: Improving the marketability of bio-products – opinion of respondents

We can conclude that Slovak bio-product market is very challenging. In the discussion we offer some suggestions how this challenge can be dealt with.

5. Discussion

With an increasing awareness of bio-products consumers in Slovakia, producers and retailers need to understand and meet the needs of this growing group of customers. Our research revealed that customers are aware of bio-products, though they have problems with eco-label or bio-product labels recognition. The most important factor influencing their purchasing behavior is taste and appearance of bio-products, on the second place respondents stated price. In respondents' opinion lower prices would enhance Slovak customers to buy bio-products. Based on results of survey we can suggest some measures to improve bio-product market position:

Promotion – promotion of bio-products in comparison with promotion of conventional products is considerably minor. Bio-product promotion is most often in magazines, or web pages devoted to bio or healthy life-style. In the media like television and radio is a substantial lack of the bio-product advertising. Producers and retailers should use this tool to increase interest of consumers in bio-products. Though the most effective and cheapest is the word-of-mouth advertising made by satisfied customer. Important role in bio-products advertising plays logo of bio-products. Also government should advertise bio-label better in Slovakia.

Price of bio-products – survey showed that respondents perceive the price of bio-products as relatively high. (This factor is in strong correlation with income of household). Higher price of bio-products is usually caused by higher cost of production processes, which are usually based on natural principles and they are also more demanding of human labor. Prices of bio-products can be slightly reduced via EU´s generous subsidy policy for bio-producers, small and family farms. It can enhance also organic agriculture in Slovakia.

6. Conclusion

In this paper the consumer attitude and behaviour towards bio-products was examined. Survey confirmed that many people are already aware of bio-products and through their buying preferences also present certain lifestyle, part of which becomes even more intense in consumption of organic or bio-products. The task of this time is to find a way how to connect the nature with available technological capabilities and scientific knowledge so that we can move towards sustainable development of the whole society.

In conclusion, further research with an expanded survey and increased number of respondents can report better results. Apparently, Slovakia should make more consumer studies and carefully examine the market barriers as well as chose effective tools of promotion of bio-products and increase consumers´ awareness.

7. Acknowledgements

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Online address: http://jedep.spiruharet.ro
Editors' email : office_jedep@spiruharet.ro