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COLEGIUL DE REDACȚIE

CONTENT

ATHLETIC CAREER AND ATHLET'S PROFESSIONAL SELF-DETERMINATION

ARABADZHY T.D

Abstract: *The most characteristic peculiarities of the profesional sportsmen's life and activity are cosidered. It is shown that this type of activity is always restricted by certain age limits. The conditions and methods of the athlete's successful psychological training for the further life and activity after the athletic career completion. The theoretical points of the paper are proved by the author's practical experience and by the results of his pedagogical experiment.*

Keywords: profesional sport, profesional self-determination, career completion, psychological training

JEL (Journal of Economic Literature) Classification:
http://www.aeaweb.org/journal/jel_class_system.html

1. STATING OF THE ISSUE

The main result of the scientific and technical and also social progress is the constant increase in the labour productivity in the material production sphere which results in the redundancy of the huge part of the personnel. At the same time people who are still employed get the declined working hours and increased spare time. The impact on these two factors stipulates the pretty large increase in number of people for whom their occupation during the free time turns into their profession. At the same it occurs that the working people transphere to the non-productive spheres, first of all to the tertiary industry and also to the education, science, art and sport. The professional sport up rise accompanied by the formation of its new kinds and constant increase in the number of teams, which take part in the leagues of different levels and classes, in fact has resulted in the formation of the large number of people for whom sport has become the main type of their occupation.

This situation gives rise to the whole range of serious problems. Firstly, sport as any other occupation requires the special professional training which results in the formation of the sport education system. Secondly, the high achievements sport requires the developed infrastructure for its development, as the result such professions as a coach, a sports doctor, a massages, a manager, etc. Thirdly, the high showmanship of sport competitions attracts the audience which brings considerable profits while making this sphere potentially profitable and attractive for investors. Fourthly, together with the market relations development sport gets more commercialized which becomes apparent as the enticing of the athletes from one team to another one by high wages. At last, fifthly, the bright professional manner of doing sport within the high achievement sphere requires also the official recognition of this occupation as the profession with its proper legal regulation, the system of sick-leave certificate redemption, provision of pensions, etc.

At the background of these problems the serious problem on the athletes' self-determination, which is caused by the natural age limitation of their career duration, is often unobserved. This matter has two relatively independent aspects. The first aspect is related to those people who, while doing sports, can even achieve considerable successes in the field, but they do not think it to be their major occupation. The problem of the professional determination

is solved much easier for them because they have already chosen their sphere of the activity. The problem lies only in the rational regulation of the time between the trainings and performing, on the one hand, and professional training or working activity on the other hand.

The second aspect deals with that athlete who has chosen sport exactly as their profession. These are them who face with the complicated and sometimes painful problem concerning the further choice of the occupational field after the completion of the career in the elite sport. The complicacy of this problem lies in its versatility. Indeed, it has at the sane time social, psychological, pedagogical and other character. The successful solution of this problem requires its deep examination and on the basis of the obtained results creation of the effective system of all-round athletes'' preparation to the timely realising of the problem and the choice of one's own solution strategy.

2. THE CONNECTION OF THE PROBLEM WITH THE THEORETICAL AND PRACTICAL TASKS

Is caused by the constant growing number of people who really devote themselves to sport as to their profession. This matter is assisted not only by the growing incomes of the sports clubs and appropriate athletes'' wages but also by the International Olympic Committee resolution that the professional athletes' in separate kinds of sport may take part in the Olympic Games. As the result the theoretical research on the problems of both professional and Olympic sport and their interaction were intensified. The need in the working out of the rational techniques of the educational-training process and its efficient psychological-pedagogical provision has increased.

A considerable popularity of sport among the students and significant spreading of the students' sport give birth to the complicated and to some extent questionable situation. On the one hand, the constant increase in the amounts of the scientific and technical information and its complication results in the lack of the student's time for doing sport. On the other hand, active sports trainings not only strengthen the athlete's health and the shape but also contribute to the growing of the moral-resolute qualities, strengthening of the orderliness and responsibility, which provides additional abilities for the successful mastering of the profession.

The detailed theoretical analysis of this important psychological and pedagogical controversy, which is inherent in the educational process of the high school, has to help the working out and implementation of the effective practical educational methods for students. In the organization and this work realization, by the way as in the realization of the whole educational and training process and high athletes' achievements, the coach's personality plays a very important part. It is he who helps the athlete not only to achieve perfect results but also to find out the whole life strategy for oneself.

3. THE ANALYSIS OF THE RESEARCHES AND PUBLICATIONS IN THE FIELD

The analysis says about its doubtless importance and actuality, as well as about the insufficient level of its studying. Though the sport science has relatively old roots, the wide range of problems, which rises in the process of the social development, does not let it timely be in progress in the researches, without saying about the successful solution. It is true that in 1896 the first athletics educational establishment was founded by the prominent scientist P.F. Lesgaft, which is known today as the P.F. Lesgaft National State Athletics, Sport and Health University. It became a recognized educational and scientific center on the sports issues.

Nowadays numerous athletics and sport educational establishments, incl. our national ones, put researches into practice actively on such issues as sport philosophy, sport pedagogy and psychology, and others interesting areas. Monographs, textbooks and manuals are published. As an example, the works by Yu.M. Vavilov and O.P. Laptev can be given, which are dedicated

to the peculiarities analysis of the professional sportsmen training [1] or works by L.P. Matveeva about the basis of the general sport theory and sportsmen training systems [2]. The fundamental work on the issues of the professional sport has been done by S.I. Guskov and V.M. Platonov [3]. From the positions of our research subject the important event both for the sport sciences development and for the sportsmen's training practice is considered to be the appearance of the textbook dealing with the sport pedagogy, which is prepared by the authors group headed by A.A. Sidorov. The methodological approaches to the studying of new regularities and principles of the whole spots and pedagogical process organization are examined in the book, the points of view of the Russian and foreign scientists on the sport pedagogy problems are also given there, the book covers the content of the modern methods and technologies of the sportsman's studying, training and personal development [4]. A lot of useful information for coaches and athletes are given in the book by G.D. Gorbunov about the sport pedagogy [5].

There are published different professional journals and volumes on the PT and sport. Among them we can point out such as "Theory and Methods of PT and Sport", "Young Ukrainian Sport Science", "Slobozhanskiy Science and Sport Bulletin", "Actual Problems of PT and Sport", "Science in the Olympic Sport", "PT, Sport and National Health", "Concept of the PT and Sport Field Development in Ukraine", "PT, Sport and Health Culture in the Modern Society", "Theory and Methods of the PT" and others. There are also scientific professional volumes "The Sport Science of Ukraine" and "Pedagogy, Psychology, Medical and Biological Problems of the PT and Sport".

To the Ukrainian youth's healthy way of life formation the series of 14 books are dedicated, among which we should point out the monograph by the authors group headed by O.O. Yaremenko, where the role of the PT as the indispensable component of the youth's healthy way of life formation system is grounded [6]. Its peculiarity is that it deals not so much with the professional sport issues as with the popularization of PT and mass sport pastimes.

4. THE UNSETTLED POINTS OF THE PROBLEM

The results of the literature sources analysis allow to summarize that the problem touched by us, which deals with the athlete's professional self-determination and the interconnection of the self-determination with his sport career, has not been studied deeply yet both in the theoretical research and in the generalization of the educational and training practice. It is obvious that a certain part of the researchers believe that it far away from the actual tasks of the sport science.

However, as the author's life experience proves, including his athletic and pedagogical experience and numerous talks with athletes, this issue is still not only just complicated but vital and painful for them.

5. THE GOAL OF THIS ARTICLE

In connection with the issue complicity and importance, is the research of the professional self-determination essence as the specific phenomenon for the PT and sport. It is expected to consider two main aspects of the problem: its essence for those who choose sport as a profession and for those who treat sport, even of high achievements, as an important life business but still only as a hobby and the main profession is not connected with it. To be precise we confine ourselves to the analysis of the students' sport only and that's why we restrain the problem of the professional self-determination by the period of sportsman's studying at the higher educational establishment.

6. THE MAIN STATEMENTS

It is well known that the activity is one of the principal forms of the individual and social human's being. Among its numerous kinds the special place takes the professional one. Its

characteristic feature is that it is the main source of person's life support and that's why requires an appropriate professionalism and constant development of the knowledge, abilities and skills. This fact together with the person's value perception of their profession and realizing of the social significance can help the person to become a real professional in the consciously and independently chosen sphere, to gain authority and colleagues' recognition.

V.P. Andrushchenko, a well-known professional in the sphere of social and educational philosophy writes "the professional is a person who has chosen a certain field of activity as a constant life business has achieved the perfection in it and has turned this occupation into the profession". He purposely outlines that essential circumstance that "to train, to educate such a person is not an easy thing. This process cannot be accomplished by itself. Even having remarkable intellectual, artistic or physical inclinations, a teacher is needed and an establishment which will provide their appropriate development and realization" [7, c. 8].

Today when the content of such concepts as sport and PT, amateur and professional sport is gaining more precise boundaries, practically every person has to determine for oneself their attitude to sport and to its correlation with the choice of the main profession. This choice is of an extremely importance for the person as well as for sport and society in the whole. ***For a person*** such choice is important first of all because it determines their destiny in fact, possibilities of their personal and professional realization, maximal use of the creative potential and life success attainment.

For sport, the right profession choice of every separate person opens new possibilities for the high achievements, on the one hand, and reduces the number of losers who could sit on the reserve's bench for bigger part of their sport career but who thanks to that choice have found themselves in some other field and doing that have opened the way to sport for really gifted youth, on the other hand. ***For the society,*** the right professional self-determination of the person is of great importance because in such a case a person can bring the largest profit to the processes of the chosen field functioning and its development. And his or her pleasure creates preconditions for conflicts reduction and attainment of the social harmony. Also moral and resolute features, which a person has acquired during active sport trainings, will positively reflect on both professional activities and successful realization of the chosen life strategy.

However, it is very difficult for a young person to find his or her professional self-determination. And the existence of the authoritative personality of the teacher, coach or educator is not even enough for that. The reliable help in this complicated and responsible task requires the appropriate organization of the educational process and the creation of the favorable pedagogical conditions in the educational establishment.

In connection with that O.S. Ponomaryov states that the pedagogical conditions of some certain educational phenomenon is "the purposeful provision of the harmonic unity of the certain range of factors, which assist its appropriate duration, including the use of the synergetic effect of their unity and also removing or neutralization of the factors which prevents from the desired functioning manner and development of this phenomenon" [8, c. 111].

In our case such conditions are the following range of interrelated factors. *Firstly*, one of the most important factor is the existence of the student's appropriate physical characteristics necessary for the successful going for the kind of sport chosen by them. We mean his general health condition as well as the appropriate development of the speed, power, explosive, etc abilities, reactivity, seeing of the general situation and moment's choice of the rational way of action.

Secondly, the extremely important part at the student's choice of the sport career and the professional self-determination plays such his or her personal feature and qualities as discipline and purposefulness, volition and endurance, orientation to the result and the ability to overcome difficulties, first of all to overcome one's own defects, discouragement, weakness and to submit

to the requirements of the educational process and team's interests. It is very important for an athlete to wish constantly changing of the abilities, physical conditions, and moral and will qualities.

Thirdly, the general psychological climate at the higher educational establishment must be of such a kind that to help student in their successful sport trainings without lessening at the same time the demands to their studying in accordance with the chosen specialty. Vice versa, it is necessary that those physical and moral and will qualities, which are appearing thanks to sport, help them in mastering the professional knowledge, and the intellectual development, which they obtain in the process of studying, actively assists the sport skills increase by the intelligent attitude to that.

Fourthly, for the successful fulfillment of the previous conditions, the high level of the coaches' pedagogical culture, the atmosphere of kindness and constant athletes' encouragement to increase not only their sport skills but also their mental outlook, general culture and intellectual level. The sportsmen's deep realizing of such a necessity becomes one of the important factors of their rational choice of his or her own professional self-determination variant and the individual trajectory of their sport career development. It becomes its clearly reasoned, well prepared and psychologically provided consummation which guarantees them the successful and painless transfer to the after-sport life and activities.

Fifthly, independently from the way of life in sport, which is chosen by the student, he or she must anyway get high-quality and full value professional training in the chosen field, which must be certainly supplemented by the systematic educational, pedagogical and management training. It is stipulate, on the one hand, by that he or she must work in some group, understand the colleagues, and, when choosing sport as a career, help coaches to educate younger athletes. When choosing some other field he or she will anyway have to train and reeducate their workers and even to provide their educating.

On the other hand, the skills gained at the period of active sport life often contain the wish to manage people, to look for better variants of action. And for the appropriate effective influence on people and the desirable results of joint actions attainment not only the high level of the professional competence but also a certain general, psychological, moral and ethics culture is needed. For such an influence on the personnel the ex-athlete must be a real example for the subordinates as a professional and as a person with high moral and will qualities, as well as with physical health and the healthy way of life.

That's why we agree with the opinion of O.G. Romanovkiy considering the "formation of the future engineer-manager health, his physical culture and inculcating in him or her the conscious skills of sticking to principles of the healthy way of life is also one of the most determinative and most important tasks of the student's physical education during the studying" [9, c. 181]. In other words, these qualities appear to be extremely important independently from the career which students will choose after the finishing of the higher educational establishment and from their professional self-determination. Moreover, they are needed by a person in the case when he or she chooses the sport career, which sooner or later they will have to complete.

In the last case a very important part is played by the formation in the sportsman the psychological and moral readiness to such career completion. But here the sport pedagogy meets with a serious contradiction. On the one hand, the main goal of this pedagogy must lie in the appropriate athlete's training (physical, moral and psychological) and his clear orientation on the determined result achievement at the necessary moment. On the other hand, the sport pedagogy cannot but ignore the fact that the specific feature of the sport career is its completion at the time when the athlete is a relatively young person, has high physical and intellectual conditions and moral and will qualities in the majority of cases. And that's why one of the most important tasks of this pedagogy is the necessity of such sportsman's education which will prepare him or her to

the career completion so that this would not be a stroke or suddenness.

As the life practice and private author's experience show the successful solution of this problem is not only possible but also becomes very effective in conditions of the systematic approach to the educational and training process. Especially, this deals with the team kinds of sport. That's why on the author's private initiative and taking active part, the strict purposeful training system is realized by the coaches in the basketball club "Polytechnic". Its peculiar feature is that it orientates the club players not only on the high sport results (though it is its main task) but also on the development of their spirituality and morality, on the conscious choice of the profession after the sport career completion and on the formation of the readiness to this very important life step.

7. CONCLUSIONS AND PERSPECTIVES OF THE FURTHER RESEARCH

The completed research gives us the grounds to conclude the following. Firstly, sport is becoming one of the essential and prestigious sphere of the professional activities, which is often well paid and attracts a lot of people first of all youth and students. Secondly, the specifics of sport limits the possibilities of the active being involved in it by certain age categories, and this time comes when an athlete is full of the physical, moral and will as well as intellectual power which gives him real possibilities to be used in other fields. Thirdly, having got used to the active sport career, fans' recognition and not bad wages, the bigger part of athletes turn out to be not ready for their performing completion, faces with this moment being confused, and not always realizes the necessity of further destiny determination and choice of some new professional field. Fourthly, the example of many ex-athletes is a convincing argument that one can not only to have a successful life and activity after the sport career completion but also really effective realization of their organizational, intellectual, emotional and will, as well as physical potential, their further professional and personal development.

So, the sport career and the professional self-determination of a person who faces with this problem do not contradict each other, it the educational and training process is organized and realized didactically and systematically, takes into consideration the personal aspirations of the athlete and foresees the purposeful psychological as well as moral and will preparation to any kind of complications in life. The moral and spiritual training of the sportsman also contributes to that.

As we believe, the important direction of our further research on the raised issue must be the analysis and generalization of the athletes' self-determination practice, including its dependency on the age range of the sport career in one or another kind of sport, analysis of the athletes' individual psychological peculiarities, their level of being educated and general culture, as well another related factors.

8. REFERENCES

- Вавилов Ю. Н., Лаптев А. П. Особенности подготовки профессиональных спортсменов // Теория и практика физической культуры. – 1990. – № 6. – С. 34-36.
- Матвеев Л. П. Основы общей теории спорта и систем подготовки спортсменов. – К.: Олимпийская литература, 1999. – 318 с.
- Гуськов С. И., Платонов В. Н. Профессиональный спорт. – К.: Олимпийская литература, 2000. – 391с.
- Сидоров А. А., Карелин А. А., Нелюбин В.В., Иванюженков Б. В. Педагогика спорта: Учебник. – М.: Дрофа, 2000. – 340 с.
- Горбунов Г. Д. Психопедагогика спорту. – М.: ФиС, 2006. – 207 с.
- Фізична культура як неодмінна складова формування здорового способу життя молоді / О. О. Яременко (Кер. авт. кол.), О.Д. Дубогай, Р.Я. Левін, Л.В. Буцька. –

К.: Український ін-т соціальних досліджень, 2005. – Кн. 6. – 124 с. – (Сер. «Формування здорового способу життя молоді». У 14 кн.).
- Андрущенко В. П. Вища освіта у пост-Болонському просторі: спроба прогностичного аналізу // Філософія освіти. – 2005. – № 2. – С. 6-19.
- Пономарьов О. С. Професійна культура керівника-лідера і умови її формування // Неперервна професійна освіта: теорія і практика // Науково-методичний журнал. – 2002. – Випуск 4 (8). – С. 110-117.
- Романовський О. Г. Підготовка майбутніх інженерів до управлінської діяльності: Монографія. – Харків: Основа, 2001. – 312 с.

ECONOMIC GROWTH IN EMERGING COUNTRIES

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Abstract: *Emerging countries are countries that are in a strong development phase of activity as compared to developed countries. During the last years, emerging countries have generally managed better than many developed countries, both in terms of economic growth, public debt, or trade balance. However, even if many of these economies are still facing high rates of growth that might be the envy of many developed countries, they show signs of weakening.*

In this paper we intended to show a brief overlook of what emerging countries are, what their registered economic growth is and which the prospects are.

Key words: emerging countries, economic growth, development

1. INTRODUCTORY NOTIONS

For a better understanding of the paper, we intend to clarify from the beginning the terms of the discussion – economic growth and emerging countries.

With regard to the content of economic growth different opinions emerged, which leads to a diversity of definitions of this process. More broadly, economic growth is the upward trend of some aggregate economic sizes in a given spatial and temporal framework. Narrowly speaking, economic growth is interpreted as a positive, upward trend of the macroeconomic outcome, which represents the generally accepted view. In order to have economic growth, it should be considered that this growth must be sustainable and not accidental.

By definition, emerging countries are countries that are in a strong development phase of activity as compared to developed countries. Especially in Europe, where Western countries have had weak economic growths and emerging countries in the East Europe have had much higher growths. Certainly, from a medium-term perspective, there are countries that offer, especially in terms of banking, very interesting statements, and thus, by definition, there are countries with very important economic growth. Emerging countries are developing countries with high GDP growth, high level of industrialization and export of industrial products, high outward opening and domestic market expansion. They have very important development abilities, but, also, many vulnerabilities that should be approached in the following years, if they want to consolidate their emergence and continue reaching the developed countries. The main emerging countries are: Brazil, Russia, India and China. This list can be completed by South Africa, Mexico, Indonesia.

In recent years, emerging countries have generally managed better than many developed countries, both in terms of economic growth, public debt, or trade balance. However, even if many of these economies are still facing high rates of growth that might be the envy of many developed countries, they show signs of weakening, breaking, at least temporarily of the spectacular growth rate of the last years. Generally, the increase of GDP in emerging countries and developing countries is expected to be around 5,6% in 2012, down from 6,2% in 2011 (FMI, Mise à jour des Perspectives de l'économie mondiale, juillet 2012).

2. ECONOMIC GROWTH IN EMERGING COUNTRIES

Emerging countries now account for nearly 40% of the gross domestic product (GDP), more than half comes from the four giants: China, India, Brazil, Russia, as against the only 20% from ten years ago: strong economic growth and, for the first time in the last decades, relatively stable, has led to an impressive capture. The rapid growth, often with two numbers, is also unprecedented in the history of economic and lasting changes. The share of developing countries within the population of the world is constantly growing, now reaching 85%, while their share in the global GDP began to grow substantially by more than 20% in 1990, 35% in 2012 and over 40% in 2015, according to the forecasts of the International Monetary Fund (IMF). Of the 20 countries that will dominate the world in 2015 (which will represent for 80% of the global GDP), ten will be developing countries. Among these, developing BRIC (Brazil, Russia, India, China) stands out.

The convergence of poor countries to rich countries in terms of living standards is far from being achieved. However, some of them, especially among the "big emerging" seem to have entered into an accelerated dynamic convergence, marked by a structural transformation that involves a reallocation of production factors into the most productive sectors of the economy. These countries have, so far, based mainly on developing the production sector manufacturing tradable goods.

The largest emerging countries contribute more than ever to the global economy, as developed economies have increasingly more difficulties. Brazil, Russia, India and China, known as BRIC, will represent 20 percent of the global economy until the end of this year, after having registered increases of four times in the last decade. Meanwhile, the market value of the listed companies of these countries fell to the lowest level of the last three years, representing 16 percent of the total market.

According to Jim O'Neill, president of Goldman Sachs Asset Management, these markets are a great investment opportunity, unless there will not be a collapse of these economies. BRIC countries' share price could double until 2020, as their share of the global GDP will increase to 27 percent, said O'Neill, who manages funds of 824 billion dollars.

The combined GDP of BRIC countries will increase to more than 14 trillion dollars this year, from 2,8 trillions in 2002, according to the International Monetary Fund. The value of the companies listed both at local and international stock exchanges dropped to 7,6 trillion dollars, from 9,5 trillion dollars, a year ago, according to Bloomberg.

Petroleo Brasileiro, Brazil's state oil company, dropped to the 39 place in the ranking of most valuable companies, from the 10^{th} place held in July 2011 (http://www.ziare.com/articole/crestere+economica+tari+emergente)''.

Emerging countries will have an even greater advance than the developed ones in 2012 and 2013. These will increase overall by 5,3% this year and by 6,3% in 2013, according to Ernst & Young Rapid Growth Markets Forecast report, issued in Ziare.com. In comparison, the International Monetary Fund forecasts a contraction by 0,1% of the European Union's economy, after previous estimates expected an increase of 1,4% and the United States forecast an increase of 1,8%.

Consumption remains the main engine of growth in the coming months. Expansion of the middle class in emerging countries, especially in Asia, will stimulate the increase of demand and trade flows between fast-growing markets. For example, the number of Chinese households with an income of 30.000-50.000 dollars per year will increase from 1,6 million in 2010, to approximately 26 million in 2020. Consumption in most countries with rapid growth will continue to surpass the one in developed countries. According to Ernst & Young forecasts, consumption growth in emerging markets will be twice more rapid than in USA and China will grow four times faster.

3. EMERGING COUNTRIES' PERSPECTIVE

In view of economic growth of emerging countries, we can do a review, as it follows (http://www.privatebanking.societegenerale.fr/fr/strategie-investissement-fevrier-2012/focus/marches-emergents-47/):

- China and Russia are still the favourite markets. We expects a smooth grow in China, with an increase of approximately 7,5 up to 8,0% this year (as against 9,1% in 2011). GDP growth resumed as a priority in the fight against inflation, paving the way for further monetary loosening. Russia is also worthy of appreciation, despite the uncertainty caused by the recent political protests. GDP growth is stable, of approximately 4%, inflation has decreased (although high, of 6%). Central bank will probably maintain a restrictive policy to curb inflation and capital outflows, for the benefit of the Rouble.
- We are even more optimistic regarding South Korea which has evolved into an excess of growth, despite a difficult macroeconomic environment. First of all, Korean stocks have attractive valuations and re, therefore, well placed to take their game, in case of reversal. With a limited deceleration of the Chinese economy, Korean exports might be the main beneficiaries of the attention given by the increase factor of the Chinese internal consumption.
- Brazilian authorities have committed themselves to stimulate significantly the growth, which could be detrimental to credibility, given the inflation target of the central bank. The country has been, during the last decade, the most important economy in Latin America, being constantly fuelled by important resources of wealth and by Chinese investments. Its dominance is currently threatened, considering that other emerging have increasingly more competitive costs, says CNBC.
- "The last decade has been very good to Brazil. Now the country has to handle the competition from many other countries, and the costs for business are 'Achilles' heel', so that it becomes more complicated to generate", explained James Lockhart Smith, analyst of the consulting company Maplecroft.

After an increase of 7,5% in 2010, the advance of the GDP might slow down to 3,2% in 2013, according to the Brazilian central bank, which remains, however, a much better increase than the one expected in USA or the European countries.

- Another sign of decline is the increase of only 4% in 2012 of Sao Paolo stock exchange, while listed companies have gathered only 7,6 billion dollars last year, as compared to the record 50 billion dollars in 2010. Moreover, the rate of inflation reached 5,8%, the highest level in the last 10 months. Salaries continue to rise, good news for the country's middle class and for the consumption, however, this affects competitiveness.
- India's economy will have a growing trend of 9% per year because inflation slows down and the government will mark a record regarding the market's opening policies, says the Prime Minister of India, Manmohan Singh. "We shall maintain the trend and make India an eminently banking economy", he added in an interview for CNBC.

India's economy ,,could have a growth higher than that of China during the next 10 years, if it quits the ceiling imposed by retail foreign investments and increases expenses with the infrastructure, said the economist Nouriel Roubini, quoted by Bloomberg. "I am very optimistic with regard to the growth of India in the future. The challenge for India will be to support an annual advance of 9% and at the same time maintain control over inflation", said Roubini, professor of economics at New York University. Roubini, who predicted the economic crisis, thus joins the Morgan Stanley group who previously predicted that India will grow sooner than China. India, which is about to invest 1.000 billion dollars in infrastructure over the next 5 years, had a GDP

advance of 8,% in the third quarter. "China will probably slow its rhythm in the coming years and the increase of India will accelerate", claimed Roubini. India will have an increase by 136 million people of the labour force until 2020, as compared to 36 million in China, according to a Morgan Stanley (http://www.business24.ro/articole/crestere+economica+india) study`.

4. CONCLUSIONS

International Monetary Fund (IMF) lowered the growth forecast for the global economy for the second time since April, warning that failing to resolve the problems by the policymakers in USA and Europe will prolong the crisis.

Growth in advanced countries is too weak to reduce unemployment and the short moment of respite is mainly due to the central banks' policies, shows the report in Global Economic Prospects 2012, quoted by Reuters. "A key aspect is whether the global economy hits a new wave of turbulence in a recovery period anticipated as slow and difficult or if the current slowdown has a long-term component. The answer depends on the ability of the leaders from USA and Europe to handle the short-term economic challenges", said the report.

Compared to the developed countries, emerging countries are more optimistic about the future, especially Russia, Brazil and India.

Emerging economies will have a much greater advance than the developed ones in 2012 and 2013. They will increase overall by 5,3% this year and by 6,3% in 2013, according to the Ernst & Young Rapid Growth Markets Forecast report, issued by Ziare.com.

Consumption remains the main engine of growth in the coming months. Expansion of the middle class in emerging countries, especially in Asia, will stimulate the increase of demand and trade flows between fast-growing markets.

The slowdown of economic growth in Europe has reduced the orders of raw materials and works in emerging countries and limited their market for the old continent.

In Brazil, "various institutional barriers have kept the interest rates high, to favour banks and businesses, but they have undermined investments. A great part of the population thickens the undeclared unemployment lines, while many young people do not have access to education, creating the prospects for unemployment (http://www.ziare.com/articole/probleme+economice+tari+emergente)''.

5. REFERENCES

- FMI, Mise à jour des Perspectives de l'économie mondiale, juillet 2012;
- http://www.ziare.com/articole/crestere+economica+tari+emergente;
- http://www.privatebanking.societegenerale.fr/fr/strategie-investissement-fevrier 2012/focus/marches-emergents-47/;
- http://www.business24.ro/articole/crestere+economica+india.

CHARACTERISTICS OF THE FINANCIAL ACCOUNTING SYSTEM

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Abstract: *Most often, financial accounting is seen only through the accounts and records characterising it. This vision of financial accounting should however be reconsidered because it meets, together with its function of recording transactions and events generated by the company's relations with the internal and external environment, a series of functions supporting the development of forecasts, the construction of strategies and the decision-making within entities. Financial accounting relies on a global approach of the company, subject to strict regulations, even if they now tend to be harmonised with the international provisions, reasons for not entirely meeting managerial requirements. We cannot overlook the role of financial accounting since one of the objectives refers to building a fair image, highly important in the company's relationships with those interested in accounting information.*

Key words: financial accounting, management, principles, functions

JEL Codes: M41

1. INTRODUCTION

The key objective of accountancy consists of the "*measurement, evaluation, knowledge, management and control of assets, debts and registered capital, as well as the results obtained from the activity of legal entities and individuals that have to provide chronological and systemic record, publishing and maintaining the information regarding the financial position, financial performance and cash-flows, both for their internal requirements and for the relationships with current and potential investors, financial and commercial creditors, customers, public institutions and other users*" (*Accounting Law no.82/1991*, republished) and as Oskar Morgenstern said that (quoted by Horomnea; Tabără, 2002: 13), *„Accounting is the most important source of economic information of a nation"*.

It can be said that nowadays, *the accounting system is for an enterprise what air and water are to life (Munteanu, 2000: 10)*, a model of representation of the company's life. The diversity of accounting information needs has caused the creation of two representations of the same reality: an "internal" representation and an "external" representation. Formally speaking, we can refer to a symbiosis in the accounting activity between two elements of the company's accounting system: *the financial or general accounting* (in French, "comptabilité génerale", in English "financial accounting") – considered as "the external side" of the enterprise – and *managerial accounting* (in French, "comptabilité analytique", in English "managerial accounting") – considered as the "external side" (Minu, 2003: 15) of the organisation, each of these having specific functions (Dumitru, 2003: 15; Oprea, Cârstea, 2002: 7-12).

There can be noticed in the accounting practice of the last decade an integration of these two types of accounting, giving rise to an integrated accounting (Sărac, 2011: 21)**,** without implying the disappearance of one of them. The emergence of integrated accounting was possible simply because of information technologies – particularly software – by the introduction of a single introduction into the system of the information and the automatic processing for both elements of the accounting system. We believe that a dual representation (Minu, 2001: 17-19) of

accountancy meets best the future strategic requirements and leads to a better overall image of the enterprise and of each of its management profit and performance centres, since it is well-known that, in the market economy, the most important resource of competitiveness is information and since accountancy cannot replace the manager, it provides instead the necessary information for decision-making processes (Horomnea, Tabără, 2002: 11).

2. THE NEED FOR FINANCIAL ACCOUNTING ORGANISATION IN TERMS OF ITS SPECIFIC FUNCTIONS

The specialised literature is very rich in terms of financial accounting. However, most papers show this part of the accounting system through the accounts and records that characterise it. We cannot say that we have found the issue of financial accounting treated in terms of its managerial usefulness, but very briefly. In fact, we believe that *Dissertation on financial accounting* (1998) of the distinguished specialists Niculae Feleagă and Ion Ionaşcu is a reference element on the approach of financial accounting from managerial perspective. Moreover, we insisted on the definition given by the two authors, a definition we consider highly complex due to the fact that it reflects the usefulness of financial accounting in the management and administration of the company: "*Financial accounting has the role of recording the company's transactions with its external environment, to determine its periodic and synthetic patrimonial and financial situation, and also the results of the operations performed; financial accounting information are retrospective and public, by the disclosure of its products"* (Feleagă, Ionaşcu, 1998: 36).

With regard to this definition, we consider that the following may be added:

- The authors use only the term "transactions". In our opinion, this term is restrictive, targeting the relationships between business partners. We also recommend the use of the term "events" which shows that the situations caused by changes from the external environment are also recorded in the financial accounting. For example, reducing the rate of exchange, for the payment of an invoice in foreign currency, may be considered as an event. The actual payment is the result of the transaction, but emphasizing the reduction of the rate of exchange is due to the changes on the foreign exchange market;
- Moreover, the authors use only the term "external environment". We believe that the term "internal environment" should also be used, because, employees, for example, as elements of the company's internal environment, generate a set of events that should be outlined in accounting terms (expenses with the salaries, with the professional training etc.).
- As described in the section on the principles of the management of the accounting activity, one of them referred to the fair image. Therefore, in the definition of financial accounting, this concept should also be included, the fair image being the primary objective of the prepared financial statements, as information products.
- In addition to this definition, we could also add that the record of transactions and events is made in accordance to the principles of the management of the accounting activity, as well as to the legal requirements established.
- By introducing the phrase "useful information" we shall emphasize the importance they have in the decision-taking managerial process.

Given the above, in our opinion *financial accounting has the role of recording all events and transactions affecting the company in its relations with the external and internal environment, in accordance with the established legal principles and requirements, developing synthetically and periodically financial statements that render a fair image of the company's financial position and performance and that are useful to a wide range of users when they take*

decisions that affect their interests and the company. Consequently, *the functions* (Ciuhureanu, 2003: 274-281) carried out by financial accounting can be summarised as it follows:

- *The recording function* of transactions and events generated by the company's relations with the internal and external environment;
- *The display function of a fair image* of the company's financial position and performance;
- *The function of summarising* the data and information;
- *The communication function,* both with the external environment (investors, state, credit institutions, etc.), and with the internal environment (managers, employees, etc.);
- *The function of evidence instrument in court*;
- *The function of internal management instrument* of the company;
- *The support function of the financial and general management* in the development of forecasts, establishing strategies and making decisions.

Professional activities carried out for the organisation of financial accounting, either from the company, or authorised persons from outside, is characterised by the fact that they are *unitary* for all economic entities. Their subject is comprehensive and consists of monitoring, controlling and fairly presenting the elements of assets, liabilities and equity, the profit (loss) for the period, through the financial statements. Therefore, financial accounting benefits has a chart of accounts, implementation instructions of the chart of accounts, the structure of the recording logs, etc., including the structure of the financial statements. In other words, *the financial accounting organisation is subject to legal regulations*. The options to influence the outcome depend especially on the *reasoning* and *ethics* of the accounting specialist, who, at the managers' request, through various financial-accounting tricks, may help improve or worsen the company's situation.

Trying to briefly conclude the above mentioned, in our opinion, the activities involved in the financial accounting organisation aim to provide accounting information that, in addition to an internal managerial usage, is also communicated outside the company. However, we have noticed that many of the companies' managers consider the financial accounting as a necessity imposed by legislative provisions, its sole purpose being to inform the state. We believe that this attitude should be changed, especially since we noticed that those who have such an opinion do not do anything to establish new indicators based on the information supplied by the financial accounting that would reflect at least the essential aspects regarding the company's performances (Balte□, Ciuhureanu, 2009, 742-747).

3. (UN)REGULATED PRINCIPLES TO BE FOLLOWED IN THE FINANCIAL ACCOUNTING SYSTEM AND INFORMATION IMPLICATIONS

Accounting principles are "conceptual elements that guide the lawgivers in the development of accounting rules, … support elements for the producer of financial information, for a correct counting of transactions and other events, as well as for a fair representation of the financial situation, performances and evolution of the financial situation, through the synthetic documents" (Feleagă, Ionaşcu, 1998).

The specialty literature outlines an abundance of principles and the variety of these principles inevitably leads to several classification criteria. However, they can be structured, depending on their regulation, in two large categories (Toma, 2002: 28): e*xplicitly regulated principles*; *non-regulated principles*.

Accounting principles are treated in terms of dualism, i.e. of the financial and managerial accounting, considering both the legal regulations and other non-regulated principles that have, however, significant information implications.

a. Going concern principle. In our country, it is stipulated that, according to this principle, "*the entity carries on with its normal operation, without going into liquidation or significant reduction of activity*". The Romanian text complies with the definition given by I.A.S.B. according to which "*the enterprise is normally considered as being in business, which means that it continues to work in a predictable future. It is admitted that the enterprise has neither the intention, nor the obligation to go into liquidation or dramatically reduce the size of its activity*".

b. Consistency principle implies that evaluation methods should be applied consistently from one financial year to the other, leading to a relevant analysis for the purpose of obtaining some financial and economic indicators that can be used by all stakeholders. The methods' constancy is the corollary of all the other principles because it is in relation to what might be called "the accounting strategy of the enterprise", namely the fiscal pressure on accounting. Evaluation methods are a means of changing the obtained result, especially in terms of reducing it. Changes in accounting policies may be caused by the following situations (OMFP 3055/2009):

- The initiative of the entity, in which case the change must be justified in the explanatory notes to the annual financial statements;
- A decision of the competent authority which is imposed to the entity (regulatory change), in which case the change does not have to be justified in the explanatory notes, but simply mentioned in them.

The change of accounting policy at the entity's initiative may be determined by:

- Exceptional change occurred when due to the entity or the economic-financial context in which it operates;
- Obtaining reliable and relevant information.

The necessity of this principle comes from the need to get a fair image and from the fact that a financial analysis implies making comparisons. Therefore, these cannot be achieved unless the same rules are obeyed.

c. Prudence principle. It is considered the cornerstone of accounting because its application protects the entity, but especially the third parties, against subjective evaluations, risks and uncertainties that might occur in the future. It can be said that the prudence principle requires preventing, on one hand, the overvaluation of assets and income and, the other hand, the undervaluation of liabilities and expenses, for the depreciations, risks and possible losses that might occur during the current financial year or that occurred during previous periods. From the operational point of view, the principle is related to evaluation, to how pluses and minuses are outlined, through which the concern to protect investors by avoiding overestimation of profits and assets and underestimation of expenses and liabilities. Basically, with its help, the state protects the interests of all those interested in the information provided by the company, ensuring that they do not present the situation in a more favourable light than it really is, but quite the contrary.

d. Matching principle requires the consideration of all incomes and expenses relating to the financial year for which the reporting was made, without taking into account the date of receipt or payment of amounts.

A controversy of this principle, with consequences for the others, arose from the concept of "financial year". Formally, a financial year includes a period of 12 months, i.e. from the 1st of January of the current year to the 31st of December of the same year. There was also the opinion according to which the period of the financial year should be equal to the normal operating cycle of the entity. Such an option would have been hard to implement, risking serious consequences both on the enterprise and on the users of accounting information, due to unexpected events that

have not been considered. Although questionable in terms of reality, the artificial partitioning of the company in periods has certain advantages, namely (Toma, 2002: 31):

- The possibility of assessing the activity by comparing it to previous periods;
- Governments are interested in accurately determining taxes and social contributions;
- Statistical bodies, national accountancy and similar bodies that are interested in particular aspects of the company's activity may do their work smoothly.

e. Opening balance principle provides the correspondence of the closing balance sheet of the previous financial year to the opening balance of the following year. This principle leads to a correct information of external partners, increases the degree of comparability both with the financial statements of the entity for the previous periods and with the financial statements of other entities and facilitates checking the economic integrity.

f. Offsetting principle. Under the application of this principle, the value of the assets cannot be compensated by the values of the debts, namely the income with the expenses. Any offsetting of the liabilities and debts of the entity to the same trader may be made under the law, only after recording in the accounts of the income and expenses at their full value.

g. Valuation of asset and liability items principle stipulates that each asset or liability item is evaluated separately.

h. Substance over form principle, according to which the presentation of the items from the balance sheet and the profit and loss account is done by taking into account the substance of the transaction or the transaction reported, and not only their legal form. Thus, the entity must adopt policies to ensure the elaboration of financial statements that generate reliable information that reflect the economic substance of the events and transactions and not only of their legal form. The substance of the transactions or events is not always consistent with what transpires from their legal or conventional form.

Entities are obliged to take into account all available information when accounting the economic-financial operations, so that there are rare situations in which the substance over form principle would lead to an operation different from the one established unless this principle was applied.

i. Materiality principle, of Anglo-Saxon origin, provides that the elements in the balance sheet and profit and loss account that are preceded by Arabic numerals may be combined if:

- they are an insignificant amount, and the annual financial statements provide a fair image of the assets, liability, financial position, profit or loss of the entity;
- such a combination provides better clarity, provided that the elements so combined are presented separately in the explanatory notes.

Therefore, according to this principle, the financial statements should all have elements whose importance might affect the judgements and decisions of external users, since they may act differently in lack of significant information. Insignificant elements of the same type or similar functions should be added, their separate presentation being unnecessary. The information becomes important if its failure to be presented or false declaration could influence the users' economic decisions, taken from the financial statements.

Materiality principle depends on the size and type of the element, analysed in particular circumstances of its omission. When it is considered that one or several elements are significant, both the size and the type of that element are assessed, since either of them might be a determining factor.

In practice it is quite difficult to establish the conditions that should be fulfilled to consider information as important. Both the value of the analysed element may be taken into consideration, as compared to the value of other elements and its quality (type). One way of establishing the importance of an element is by comparing the values of certain financial instruments (liquidity, solvency, profitability etc.) calculated by including or excluding the

analysed element. Moreover, materiality is calculated by most organisations using the following instruments: gross profit (0,5%-1%); turnover (1%-2%); total assets (1%-2%); net asset (2%-5%); profit after tax (5%-10%) (The Team of the Ministry of Public Finances, 2001: 317-318).

For the entities operating under normal conditions and that make profit, the most common way of determining materiality is the profit of the current year. If the values of this indicator differ, in absolute value, by more than 10%, then that element is considered important; if its value is below 5%, it is considered as insignificant; when its value is situated between 5 and 10%, it is considered important, except proven otherwise especially for qualitative reasons (Du□escu, 2002: 44). If users of financial statements are interested in the profit of the entity, an average of the profits from the last three years may be considered when calculating materiality. For the entities that had losses, materiality may be determined by using an average of the profits from previous years, the total assets or the turnover.

As mentioned, in the financial accounting, with the regulated principles, a number of non-regulated principles should also be considered. Among the most common, we mention (Toma, 2002: 29-30): objectivity principle (it assumes the existence of verifiable and objectively-established information); the principle of monetary nominalism (it recognises the need of a common denominator for recording the operations and preparing the financial statements, i.e. the currency unit); the principle of the enterprise's self-organisation (it assumes that any organisation is considered as a separate entity, having its own patrimony, by those who own it or by any company with which it gets into contact); the principle of connecting revenues to expenses (it refers to the gradual determination of the result of a reporting period, by subtracting the total expenses from the total incomes of the same kind); the facts' justification principle (it assumes that any event reflected in accounting is verifiable in terms of reality).

We believe that these principles may be regarded as the basis of the accounting system's efficiency and performance. Each of them has serious implications, especially in terms of demand and offer of accounting information. But, since accounting information stand at the basis of managerial decisions, the functions of the general management, we consider that complying with the accounting principles is a starting point for a good management of resources, a competitive general management, ensuring optimal conditions of a better future for the company.

4. REFERENCES

- Balteş, N., Ciuhureanu, A. T., 2009, Study regarding the importance of accountancy inside organizations, Analele Universității din Oradea – Ştiințe Economice, TOM XVIII, Volume III „Finances, Banks and Accountancy", pp. 742-747
- Ciuhureanu, A.T., 2003, Activitatea contabilă a firmei: suportul cunoaşterii teoretice şi practice, Analele Universității Româno-Germane din Sibiu, no. 2, Publishing House BURG, Sibiu
- Duțescu, A., 2002, Ghid pentru înțelegerea şi aplicarea Standardelor Internaționale de Contabilitate, CECCAR Publishing House, Bucharest
- Feleagă, N., Ionaşcu, I., 1998, Tratat de contabilitate financiară, vol. I, Economică Publishing House, Bucharest
- Gheorghe, D., 2003, Bazele contabilității, Ed. Menora, Constanța
- Horomnea, E., Tabără, N., 2002, Locul contabilității în sistemul general al clasificării ştiințelor, Revista Finanțe publice, contabilitate, no. 5
- Minu, M., 2003, Pledoarie pentru acordul dintre fond şi formă în contabilitatea românească, partea I, Revista Contabilitatea, expertiza şi auditul afacerilor", no. 2
- Minu, M., 2001, Monismul şi dualismul contabil – opțiuni în organizarea sistemului informațional contabil, Revista Contabilitatea, expertiza şi auditul afacerilor, no. 7
- Munteanu, V., 2000, Teoria şi bazele contabilității, Ed. Lumina Lex, Bucureşti

- Oprea, C., Cârstea, Gh., 2002, Contabilitatea de gestiune şi calculaţia costurilor, Genicod Publishing House, Bucharest
- Săcac, I. P., 2011, Forme ale contabilităţii şi utilizatorii de informaţie contabilă, Revista Contabilitatea, expertiza şi auditul afacerilor, no. 3
- Toma, C., 2002, Modalităţi de asigurare a imaginii fidele. Principii şi convenţii contabile, Revista Contabilitatea, expertiza şi auditul afacerilor, no. 10
- *** Colectivul Ministerului Finanţelor Publice, 2001, Ghid practic de aplicare a Standardelor Internaţionale de Contabilitate, part I, Economică, Publishing House, Bucharest
- The order of the Ministry of the Public Finance no. 3055/2009 for the approval of the Accounting regulations in compliance with the European directives, in Official Gazette no. 766, 766 bis/10.11.2009, with the following changes
- The accounting law no. 82/1991, republished, in Official Gazette no. 454/18.06.2008, with the following changes

USING INFORMATION AND COMMUNICATION TECHNOLOGIES FOR INFLUENCING THE CONSUMER'S DECISION MAKING PROCESS

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Abstract: *The world of business is changing. The development of new communication and information technology has created a new and fast paced environment in which managers and their companies must develop their business. Our paper presents several important aspects regarding the decision making process and its five main components (1) problem recognition; (2) information search; (3) evaluation of the alternatives; (4) decision making (5) post decision process. We also underline several important advantages and disadvantages for companies to take into consideration when designing their business and marketing strategy using the information and communication technologies of the 21st Century.*

Keywords: *consumer, information and communication technology, managers, marketing*

JEL (Journal of Economic Literature) Classification: *M10, M15, M30, M39*

1. INTRODUCTION

The business world is in a continuous state of change and development, the ever growing economy and the challenges that meet the clients and the companies in the same time are stronger than ever. Over the years the companies have had to adapt their business strategies to the new challenges of the business environment. But nothing could have prepared for them for the changes brought by the evolution of the information and communication technologies (ICT). With the help of ICT like the internet, mobile technologies, social networks etc. the companies have discovered a new environment in which the companies can thrive and develop. In our paper we present the implication of the information and communication technologies on the consumer behavior.

In the digital age, the organizations should take advantage more and more of the power and the edge offered by the information technology, in order to inform the present or potential clients or consumers in a better and faster way. Marketers have been using electronic tools for many years, but the Internet and other new technologies created a flood of interesting and innovative ways to provide customer value. This new way of reaching the costumers has captured the imagination of marketing scholars and practitioners (Gorski and Fuciu, 2009).

2. THE CLIENTS'S DECISION MAKING PROCESS

The new evolutions in the field of the informational revolution of the last decade favour more and more the network structures. The first wave of companies that used to sell their products online was doing so by offering this service via e-mail. The latest developments have shown the companies the importance and the value of information regarding the consumers in order to target tem in a more efficient manner (Ganski, 2011).

The clients decision making process is strongly related to his or hers way of life and this process usually passes through several important stages; (Catoiu and Teodorescu, 2003).

- The problem recognition;
- Information search;
- Evaluation of the alternatives;
- Decision making;
- Post decision process;

The consumer decision process generally begins when the consumer identifies a consumption problem that needs to be solved. **Problem recognition** is the perceived difference between an ideal and an actual state. This is a critical stage in the decision process because it motivates the consumer to action (Hoyer and MacInnis, 2010). The *ideal state* is the way that consumers would like a situation to be (having an excellent camera or wearing attractive clothing). The *actual state* is the real situation as consumers perceive it now. Problem recognition occurs if consumers become aware of a discrepancy between the actual state and the ideal state.

After the problem recognition stage, the consumer will usually begin the decision process to solve the problem. So the second step in the decision making process is **internal search.** This is probably the most important aspect were the information and communication technologies influences the decision making process. The clients usually search for information from several sources (Hoyer and MacInnis, 2010):

- *Internal search* – which is the process of recalling stored information from memory? Usualy the consumer brings bach from his /her memory certain aspects of the information collected there. We do not have the capacity to store large quantities of information. The main types of information recalled by consumers are (1) brands; (2) attributes; (3) evaluations and (4) experiences (Alba et. al., 1991);
- *External search* – it represents the process of collecting information from outside sources; the main sources for external search are *retailer search, media search, interpersonal search, independent search, experiential search.* The external search aspects can usually be done by the online environment. Often people with a common interest or condition related to a product or service go online to share ideas by using websites, text chat, and other tools. this information can be very influential in the consumer's decision process because it is not controlled by marketers and is therefore seen as more credible. (Fischer et. al., 1996)

The third stage in the decision making process is **evaluation of the alternatives or** like some authors state it is the judgment stage. Judgments are the evaluations of an object or estimates of likelihood of an outcome or event. This stage is closely related to the decision making stage. This represents *the process of selecting from several choices, products, brands, or ideas. The decision process may involve complex cognitive or mental activity, a simple learned response, or an uninvolved and uninformed choice that may even appear to be stochastic or probabilistic* (AMA, 2012). The result of the decision making process is: acquisition, non acquisition, postponing the acquisition or continuing the search for more information.

The last stage of the decision making process is the **post decision process**. Consumers are not always confident about their acquisition, consumption, or disposition decisions. This represents a feeling of anxiety over whether the correct decision was made. Post-decision dissonance can influence consumer behavior because it creates anxiety that the consumer would like to reduce, especially when motivation, ability, and opportunity (MAO) are high. Post-decision regret occurs when consumers perceive an unfavorable comparison between the performance of the chosen option and the performance of the options not chosen. (Hoyer and MacInnis, 2010).

3. COMPANIES'ADVANTAGES AND DISATVANTAGES FOR USING ICT

The most important ICT right now is the Internet and since several years ago the online social networks. This is a tool and an advantage for companies to use in their battle for reaching the clients and for convincing them to choose their products and services. Over the years the researches and the practice has developed several important advantages and disadvantages for companies to be aware of. The main advantages for using new communication technologies like online social networks are (Coetesee, 2012):

- *Low costs* – it is cheaper to contact the present and the potential consumers just by using a few mouse clicks than to contact them via conventional means of communication;
- *Speed* – a company can reach its consumers faster. A message that is posted on the wall of a social network reaches the client instantly;
- Can *increase the internet traffic* of your website resulting in a better promotion of the companies' products and services;
- *Increase of brand awareness*;
- It helps the company to *develop a direct and personalized* connection with the consumer; *Global* – the consumer can be reached at any time, in almost any part of the world;
- It offers the possibility of a greater contact with the consumers by a faster *feedback, interaction and support*;
- It helps improve the customer relationship management system of the company etc.

But every development of technology and of a mean of communication that can bring the consumer closer to the company can bring forth several important disadvantages. Like stated before the internet has brought forth a new environment for companies and in the last years the social networking sites have developed. Right now there are more than 1,06 billion Facebook users worldwide. What are the disadvantages of such a marketing and communication tool?

- *OSN are time consuming* – the usage of OSN means that the employees and at the same time the potential consumers spend too much time online. For example, in May 2011, the time spent by American OSN users was of 53,4 billion minutes on the Facebook.com social network alone (Barnett, 2011);
- *Continuity in action* – if a company wants to be successful it has to present online 24/7 not just now and then. This means that the company may need to hire someone for this purpose.
- *Speed* - a negative message sent or placed on the company's OSN page is moving fast and viral and it can reach the consumers in a matter of hours;
- *Target audience using many social sites* – the social networking sites are so many and they serve many different audiences, use many ways to convey messages that it becomes difficult to decide where to go, what to do and to what extent;
- *Lack of control* – once a message is posted about the companies' products and services it cannot be controlled by the marketing or public relation specialists especially if this message is negative etc.

4. CONCLUSIONS

It has become absolutely mandatory for the managers and their company to understand the need to be present on the web using this new communication and interaction tool. The strong development of the information and communication technologies and especially of the Internet over the past 15 years and of the online social networks in the last 7 years has created for companies, managers and marketing specialists alike a new platform by which consumers can be informed fast, cheap and efficiently with regard to the goods / services offered by a certain organization. These companies must be aware of the advantages and disadvantages of these new

communication methods. It has become an absolute necessity to be present out there. The consumer has become more and more technology orientated either by using personal computers, tablets, laptops of smart phones. They spend large amounts of their time in front of a screen, there for the companies must capitalize on this.

Like stated before the consumer in the process of making the best decision of acquiring the best product or service use all the information and all the technology methods that they have at their disposal. We as managers or as companies must offer, with the help of ICT, the consumer all the information in order to make the best possible decision and in the same time to capitalize the advantages of ICT and reduce its disadvantages.

6. REFERENCES

- Alba J W., Hutchinson J. W., and Lynch J. G., *Memory and Decision Making*," in eds. Thomas C. Roberton and Harold H. Kassarjian, Handbook of Consumer Behavior (Englewood Cliffs, N.J.:Prentice-Hall, 1991).
- Balaure, V. (2002) – *Marketing,* 2nd revised edition, Uranus Publishing House, Bucharest;
- Barnett, E., *Facebook dominates time spent online,* The telegraph, September 13, 2011, http://www.telegraph.co.uk/technology/facebook/8759522/Facebook-dominates-time-spent-online.html and http://blog.nielsen.com/nielsenwire/social/ accessed on April 18, 2012.
- Cătoiu, I., Teodorescu, N. (2004) – *Consumer behavior,* 2nd revised edition, Uranus Publishing House, Bucharest;
- Coetesee, F., *Advantages and disadvantages of social media and networking,* April, 9, 2010, http://www.socialmediastrategy.co.za/index.php/social-networking/what-are-some-advantages-and-disadvantages-of-social-media-networking/ accessed on April 18, 2012.
- Fischer E., Bristor, J. and Gainer B., "Creating or Escaping Community? An Exploratory Study of Internet Consumers' Behaviors," in eds. Kim P. Corfman and John G. Lynch, *Advances in Consumer Research,* vol. 23 (Provo, Utah: Association for Consumer Research, 1996), pp. 178–182; John Buskin, "Tales from the Front," *Wall Street Journal,* December 7, 1998, p. R6.
- Gansky, L., *In rețea – de ce sharing-ul reprezintă viitorul afacerilor,* Publica Publishing House, Bucharest, 2011, pp. 54-55.
- Gorski, H., and Fuciu, (2009), M., E-*advertising – a new tool for e-world managers*, 6th International Conference Management of Technological Change – Sustainable Development through Technological Change (MTC' 2009), Democritus University of Thrace, Alexandropoulis, Greece, pp. 233-236.
- Hoyer, W., D., MacInnis, D.J., *Consumer Behaviour,* 5th Edition, Cengage Learning, Mason, Ohio, SUA, 2010;
- *** American Marketing Association, accessed on December 17, 2012 http://www.marketingpower.com/_layouts/Dictionary.aspx?dLetter=D;
- *** Facebook.com, http://investor.fb.com/releasedetail.cfm?ReleaseID=736911 accessed on February, 20, 2013.

RE-EVALUATION OF THE GENERAL MANAGEMENT AND INDUSTRIAL PRODUCTION MANAGEMENT DUE TO THE INFLUENCES CAUSED BY THE GLOBALISATION OF BUSINESSES AND INTERNATIONALZATION OF ORGANISATIONS

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Abstract: Again settled starting from the reality that – change – is the dominant characteristic of this century, as an effect of the new economy, "the organisation's economy and knowledge-based management", the knowledge capital, the intellectual capital, which are the support of any performance, the power in the contemporary world being held, regardless of the effects of the economic crisis, by the economic organisations and the financial institutions where the knowledge capital has the highest percentage in the general economy of used capitals. *Businesses' globalisation and organisations' internationalization* will remain the dominant coordinates of this century. The phenomenon is defined as the one that makes things from a particular part of the world irradiate, through consequences, implications, at great distances, in other parts of the world, interdependencies involving all of them directly. This reality implies restructuring the activity of all global and regional bodies, in order to become able to stimulate beneficial and perspective self-adjusting evolutions of the global economic system, including by diminishing the crises and the existing serious problems: the resources crisis, pollution, poverty, corruption, terrorism, armed conflicts, etc.

Keywords:

L23 – Organization of Production

1. INTRODUCERE

The establishment of a market economy is a new, very complex process, requiring multiple economic, social and political mutations. Their operationalization is crucially conditioned by the content and quality of the management, both at the economic and national level.

This requires a new type of management, based on the system of values of the market economy, which, through concepts, tools and method of application, determines remodelling and competitive functioning of companies. The premises are the wide proliferation of modern management for managers, entrepreneurs and current and future specialists.

2. ELEMENTS OF GENERAL MANAGEMENT AND THOSE RELATED TO INDUSTRIAL PRODUCTION, WHICH SHOULD BE EVALUATED DUE TO THE INFLUENCES CAUSED BY THE GLOBALISATION OF BUSINESSES AND INTERNATIONALZATION OF ORGANISATIONS

As it is known, the company's management adaptation to the internal and external market developments is absolutely necessary, which makes us outline some changes of the general management elements from the perspective of running a business within the phenomena of business globalisation and internationalization of organisations (Petrescu, 2005):

a) *within the prediction function:*

- redefining the prediction's components standing at the basis of managerial decisions should be more heavily integrated in the analysis stage, the mega tendency represented by the trend of the company's business environment (this causes the mergence and manifestation of an increasingly diverse influence factors over the company's activity, which should be evaluated in view of their recovery or counteraction);
- enriching the content of the company's objectives and goals by fixing them, so that their quantitative (economic) size can be enhanced by the qualitative one (social and ecologic);
- globalisation of markets and increasing real time information possibilities provides the company global access to resources (at least theoretically – new suppliers with new prices) and knowledge of new means of action to achieve the objectives, aspects which should be introduced in the new managerial cycles.

b) *Within the organisation function:*

➢ resizing, by reduction, the company's management unit, leading to positive effects in terms of notification, dissemination and exploitation of new arrivals, participation in the decision making process;

➢ development, within the organisational structures, of functional and general staff compartments with crucial roles in designing and implementing changes that the company has to face;

➢ creating complex, dual-function subdivisions: of scientific research and actual production;

➢ the transfer, in terms of organisational structure, from the mechanistic structure (formalization and strict hierarchy, emphasis on written information, etc.) to the organic structure (low formalization, cooperation, consulting, creativity and communication have a primary role, organisational subdivisions are permanently changing sizes and composition to meet the new requirements that the company may face);

➢ increasing intellectualization of jobs; due to the increasing number of jobs that require creativity, surveillance and control, it will require the change of the tasks embedded in each post.

c) *within the coordination function:*

✓ managers should think and develop new communication networks, adapt the best information flow between work teams because, "the management consists, above all, of interpersonal relationships (…), and, (…) leading means communicating, means, above all, sending ideas, feelings, decisions to subordinates and having the possibility to return the information" (Petrescu, 1998)*";*

✓ adaptation, within the operationalization of managerial act, to the new communication methods and channels provided by current findings: the e-mail, voice mail, teleconference, creating network discussion groups (forums system), etc., which allows the information to get in real time to the recipient or the user.

d) *Within the driving function*

- redefining the relationship parameters between motivation and managerial success will determine the relocation of optimal motivational concept, based on the changes that occur in the work content and individual motivation;
- moving the centre of gravity of human resource motivation from the material component on the psychological component: increasing the managers' psychological training, proliferating management methods and techniques that rely on the complex exploitation of the human capital.

e) *within the control-evaluation function*

- rebuilding an efficient control-evaluation system, characterised by: multi dimensionality, future-orientation, low costs, maximum precisions, realistic and actual, acceptable and flexible;
- increasing the capability of control-evaluation system to support managers to: eliminate uncertainty and identify irregularities in due time (taking into account the multitude and diversity of influence factors as temporal and territorial dispersion), obtain information on how to exploit opportunities (correct determination of the company's external environment evolution: internal and international), solving complex situations (international business development will generate increased complexity of the company's current activities and their speed in evolution) and decentralization of authority (lower levels must be quick, adapt fast to the market changes and thus must have sufficient freedom of decision to do this).

Certainly the implication of business globalisation and internationalization of organisations are much more if we refer to each branch of industry or specific to each company that address such a strategy, but we believe that we have noticed the most important aspects in the lines above.

With reference to causes of globalisation: technical progress, free flow of information, cross-border nature of the economy, education and social relationships, broadening democratic borders, is as obvious as possible that the field of industrial production can not be outside this process.

An important role in structural reconfiguration of industrial production in our country is, in the context of sustainable usage of production factors, the implications arising from industrial production processes specific to national development.

Among the major trends taking place in the world in terms of industrial production, in the context of globalisation, we mention:

- *increasing the importance of qualitative characteristics of production factors, and the occurrence of neo-factors*. The continuous increase of their contribution to the results of the activity leads to a new reality, according to which the monopoly over natural conditions are no longer the source of the comparative advantage. As the national economies develop, the highly immobile factors tend to reduce their role in determining the profile of industrial production. Therefore, some authors suggested a theory of equipping with factors by considering other factors besides labour and capital;
- *globalization trend of the world economy* has a strong effect on the structure of national economy and thus on the structure of industrial production. The globalisation phenomenon is manifested by the participation of a number of different countries to the manufacturing of parts needed for goods that have reached the final stage of processing, given the unprecedented intensification of international commerce, transfer of technology and foreign investment. Investments are made in the traditional form of direct investments, but also, to a great extent, in new forms of investment: joint ventures, licenses, investment-import collaborations, management contracts, contracts for the supply of complex products "tumkey" kind, contracts of cooperation in production, international subcontracting, etc.
- integration of national industrial production involves the orientation of activities to a greater extent, *depending on the global market's requirements*, either in direct trades with partner countries, or by means of networks created as a result of the development of transnational companies ;
- *most intense economic exchanges take place between the countries with a high development level and/or common regional interests.*

The mentioned trends are mostly based on the compatibility of national economies, in terms of technical and qualitative level of the production factors used, the ability to assimilate the new technologies and the way the business is organised.

Following some studies conducted by several Romanian specialists in the Romanian production industry, together with the results obtained worldwide, the following conclusions were drawn: *a nation's competitiveness depends on the industrial production ability to improve its features, but no nation can be or will be competitive with all branches of industrial production or with most of them, even more true for the low scale economies* (Nicolescu and Verboncu, 2006). Nations succeed in those branches of industrial production for which the internal environment is more future-oriented, most dynamic and most stimulating.

The key elements that we consider essential to increase competitiveness of national industrial production are:

- *the conditions offered by factors*: Romania's position, in terms of production factors, such as qualified labour force or infrastructure, absolutely necessary to compete in a certain branch of industrial production. Quality-cost relationships may become for the Romanian companies a way to increase competitiveness, by enhancing efforts in preventing defects. Quality costs decrease by 20% for the companies that manage to implement an efficient quality management system. The road from "never mind, this works just the way it is" to "job well done" goes through stages of certification of the companies by accredited bodies, the only ones able to open access to the European Union's markets for Romanian companies.
- *demand conditions*: the nature of internal market for the industrial product or for the service;
- *related and support branches of industrial production*: the presence or the absence within the nation of certain upstream branches of industrial production and of other branches of related industrial production which are globally competitive;
- *the company's strategy, structure and competitors*: the conditions in the nation governing the creation, organisation and management of companies, plus the nature of domestic competition;
- *high degree of globalisation of competition*: the nation does not reduce, but, on the contrary, increases its importance. Since the foundation of completion gas become increasingly more the demand and knowledge assimilation, the nation's role increases. The competitive advantage is supported by a localized process, differences in national values, culture, economic and institutional structures, history, all contribute to the success in completion.

In addition to these opportunities offered by the industrial production in Romania, some threats that should be eliminated through concrete and urgent measures have been identified, among which there can be mentioned:

- further perpetuation of legislative framework instability;
- maintaining, if not accelerating to take and implement the appropriate measures to train and retrain the necessary frameworks, the poor ability of certain bodies of the central, regional and public authorities to implement the legal and regulatory provisions and to ensure the full absorption of support funds provided in various forms by the European Union;
- continued toleration of non-payment by the state-owned companies of utility bills and other debts to the budget, which are implicit subsidies;
- excessive exposure of activity from some sectors of economy (agriculture, livestock, forestry) at the risk of causing some adverse natural events (drought, flood, soil erosion), due to poor condition of specific infrastructure (irrigation system, adjustments to watercourses,, protection forest belts, etc.). The effects mentioned are also threats to the corresponding branches of industrial production activities (food industry, wood industry, etc.);

- strong competition from some foreign manufacturers, especially from China and South-East Asian countries, with low production costs, which may undermine the competitive advantage of many branches of industrial production;
- competition with manufacturers in other countries of Central and Eastern Europe, able to increase the competitive advantages by harnessing the financial resources invested by the European Union structural funds;
- the possibility of "shocks" of the local labour market as a result of restructuring some big industrial enterprises still in state ownership; the phenomenon of cross-border migration of qualified labour force, depriving the country of important human resources that might contribute to economic growth.

3. CONCLUSIONS

It can be pointed out that change emphasizes renewal, but also the uncertainty and risk; we state that in this time of crisis, some measures of change for customers. These measures should be, in terms of organisational change, centred on the *values of knowledge, changing attitudes of managers and employees and of the companies' communication and action model*, so as to avoid or diminish the risk of losing customers and therefore the market position.

As change continues, the dominant feature of this century however, with a more complex mode of expression, which includes the changes imposed by the requirements to overcome the crisis. Customer-focus – basic component of change also requires new characteristics generated by the crisis and, in particular, how new industrial economic organisations must act to ensure its market.

Business globalisation brings significant mutations in all industrial business areas and aims all general and specific components of organisations and their management (Grigorescu, 2011).

In its turn, the internalization of companies has new values, lack of sale and resources, which became general and which amplifies the urgency of internalization measures, by adopting the organisational management, especially in the industrial production where the lack of sale and resources has become more chronic than in other sectors.

Most industrial companies consider their position on national markets uncertain, including because of multinational companies. Most respondents consider that without entering the global environment, survival changes are greatly diminished.

4. REFERENCES

- Grigorescu, I.L., (2011) **Teza de doctorat** intitulată *„ELEMENTE DE MANAGEMENTUL PRODUCȚIEI INDUSTRIALE LA NIVEL MEZOECONOMIC (PE EXEMPLUL JUDEȚULUI SIBIU)"*, Universitatea „Lucian Blaga" din Sibiu;
- Nicolescu, I, Verboncu, I, *Management organizațional,* Editura Economică, Bucureşti, 2006;
- Petresu, I., *Fundamentele managementului organizației. Abordări moderne*, Editura Alma Mater, Sibiu, 2005;
- Petrescu, I., *Psihosociologie managerială,* Editura Lux Libris, 1998;

ABOUT A MODEL OF STOCHASTIC RECOURSE PROBLEMS WITH MULTIPLE OBJECTIVE FUNCTIONS: *P*-MODEL

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Abstract. *This work deals with stochastic vectorial programming problems with simple recourse in two stage of P-model type with probabilistic constraints. It formulated the problem in this case and is stated a way of solving it by converting the probabilistic constraints into their equivalent deterministic and searching the equivalent deterministic of objective functions. The problem is reduced from multi-objective case to a single objective function by using a synthesis function obtained through minimization criterion of distances' sum between possible maximum of each objective function and it value in a certain point.*

Keywords: C61 Programming Models

1. INTRODUCTION

P-model was considered for the first time by A. Charnes and W. W. Cooper case in which the constraints are deterministic, and in case of random constraints by Charnes and Kirby [1966], in this final case the stochastic programming problem is considered in two stage. Stancu-Minasian [1980] generalizes P-model presented by Charnes and Cooper from a objective function to r objective functions, introducing the notion of *multiple minimum risk solution* as a generalization of the minimum risk solution independently introduced by B. Bereanu and Charnes and Cooper.

In this present work we propose ourselves to generalize the model for an objective function, proposed by Charnes and Kirby to r objective functions. A.Prekopa [1995] underlines that the *P*-model with probabilistic constraints hasn't been studied and after author's knowledge for the vectorial case problem hasn't been formulated.

We formulate the P-model stochastic programming with multiple objective functions (of minimum risk)

$$\text{Vmax} \quad f_k(x, \xi_2) = P[z_k(x) - q_k^{\mathrm{T}} y \geq u_k], \qquad k \in I = \{1,2,\ldots, r\} \qquad (1)$$

subject to:

$$P(Ax \leq \xi_1) \geq p_1$$
$$P(Tx + Wy = \xi_2) \geq p_2$$
$$Bx \leq b$$
$$x \geq 0, y \geq 0,$$

where , $z_k(x)=c_{k1}x_1+ c_{k2}x_2+...+ c_{kn}x_n$, $k \in I$ are linear functions, u_k, $k \in I$ are given values $\xi_i = (\xi_{i1}, \xi_{i2,...,} \xi_{1m_i})^{\mathrm{T}}$, i=1,2 is a random vector defined on a probabilistic space (Ω,K,P), A is an m_1 x n matrix, T is an m_2 x n matrix, W is a unit matrix of the order m_2, x is an n-vector, y is an m_2-vector, B is an m_3 x n matrix, p_i , i=1,2 are probabilistic vectors of m_1 respectively m_2 dimension, b is an m_3 vector . A and T matrix might have random elements.

Solving problem (1) means solving of the two so called stages; in order be easier note we begin with the second stage which is:

$$\min \; q_k^{\mathrm{T}} y, \qquad k \in \mathrm{I} \tag{2}$$

subject to:

$$\mathrm{P}(\mathrm{Tx} + \mathrm{Wy} = \xi_2) \geq \mathrm{p}_2$$
$$x \geq 0, y \geq 0,$$

for fixated x and ξ_1.

The first stage of the problem (1) is

$$\mathrm{Vmax} \; f_k(x, \xi_2) = P[z_k(x) - q_k^{\mathrm{T}} y \geq u_k], \qquad k \in I \tag{3}$$

subject to:

$$P(Ax \leq \xi_1) \geq p_1$$
$$x \geq 0, x \in K_2$$

where K_2 is the set of those $x \in \mathbf{R}^n$ vectors for which the constraints of the second stage are satisfied, that means the set

$$K_2 = \{x \in \mathbf{R}^n | \text{ for each } \xi_2, p_2 \text{ exists } y \geq 0 \text{ so that } P(Tx + Wy = \xi_2) \geq p_2\}.$$

We note with K_1 the set of those $x \in \mathbf{R}^n$ vectors for which the constraints of the first stage are satisfied, that means $K_1 = \{x \in \mathbf{R}^n | P(Ax \leq \xi_1) \geq p_1, x \geq 0, x \in K_2\}$. We note with K_3 the set of those $x \in \mathbf{R}^n$ vectors that satisfies the constraints $Bx \leq b$ so $K_3 = \{x \in \mathbf{R}^n | Bx \leq b\}$.

The interpretation of the model is: x represents a decision who shall to satisfy the constraints $P(Ax \leq \xi_1) \geq p_1$, $P(Tx = \xi_2) \geq p_2$, $Bx \leq b$. Because of the fact that the first two constraints contain random elements, it is possible, that due of some causes, the constraints shouldn't be satisfied and we will consider that is happen for the second constraint $P(Tx \leq \xi_2) \geq p_2$; in this case is taken a recourse-decision y through which to be fulfilled these constraints which become $P(Tx + Wy = \xi_2) \geq p_2$, where for the problem with simple recourse we get $\mathrm{W} = I_{m_2}$. The recourse decision y influences each objective function, this being penalised with q_k, $k \in I$ value, where $q_k = (q_{k1}, q_{k2}, \ldots, q_{k m_2})$.

Definition 1. A feasible solution for (1) is a vector x so that for every $\xi_1 \in \Omega$ it satisfies the first stage constraints and so that for every $\xi_2 \in \Omega$ is always possible to find a feasible solution of the second stage.

The problem that interest is how we can obtain the multiple minimum risk solutions of the problem (1) taking into account that both the objective function and some of the constraints of the problem are probabilistic.

Solving the problem (1) which we write as

$$\mathrm{Vmax} \; f_k(x, \xi_2) = P[z_k(x) - q_k^{\mathrm{T}} y \geq u_k], \qquad k \in I \tag{4}$$

subject to:

$$x \in K_2,$$

means finding the multiple minimum risk solution.

Definition 2. A point $x^0 \in K$ is *multiple minimum risk solution* if it is an efficient solution for (1), that is if there is no $x \in K$ so that $f_i(x, \xi_2) \geq f_i(x^0, \xi_2)$ for $i \in I$ and for at least $j, j \neq i$ we should have $f_j(x, \xi_2) > f_j(x^0, \xi_2)$.

Solving *P*-model stochastic programming problem with multiple objective functions

We introduce the next assumptions for the problem (1): the random variables ξ_1, ξ_2 have a normal distribution and are independent. The set K is compact and nonempty. In order to find the multiple minimum risk solution we perform the next steps:

a. we determine the determinist equivalent of the second stage's constraints, meaning the constraints of problem (2);
b. we determine the determinist equivalent of the constraints of problem (3);
c. we determine the determinist equivalent of the constraints of problem (1);
d. we determine the optimal solution for a *synthesis function* F* of the r objective functions.

Let be the constraints of the second stage of the problem (1)

$$P(Tx+Wy=\xi_2)\geq p_2,\ x\geq 0, y\geq 0,$$

first of these we can write as:

$$P\left[\begin{pmatrix} g_{11} & g_{12} & \cdots & g_{1n} \\ g_{21} & g_{22} & \cdots & g_{2n} \\ \cdots & \cdots & \cdots & \cdots \\ g_{m_2 1} & g_{m_2 2} & \cdots & g_{m_2 n} \end{pmatrix}\begin{pmatrix} x_1 \\ x_2 \\ \cdots \\ x_n \end{pmatrix}+\begin{pmatrix} 1 & 0 & \ldots & 0 \\ 0 & 1 & \ldots & 0 \\ \ldots & \ldots & \ldots & \ldots \\ 0 & 0 & \ldots & 1 \end{pmatrix}\begin{pmatrix} y_{21} \\ y_{22} \\ \cdots \\ y_{2n} \end{pmatrix}=\begin{pmatrix} \xi_{21} \\ \xi_{22} \\ \cdots \\ \xi_{2m_2} \end{pmatrix}\right]\geq\begin{pmatrix} p_{21} \\ p_{22} \\ \cdots \\ p_{2m_2} \end{pmatrix}$$

Let be $K_2=G_1\cap G_2\cap\ldots\cap G_{m_2}$ where

$G_i=\{x\in\mathbf{R}^n|\ P[(g_{i1}x_1+g_{i2}x_2+\ldots+g_{in}x_n+y_{2i})=\xi_{2i}]\geq p_{2i},\ y_{2i}\geq 0\},\quad i=1,2,\ldots,m_2.$

We determine the determinist equivalent of G_I, $i=1,2,\ldots,m_2$ set:

$G_i=\{x\in\mathbf{R}^n|\ P(g_{i1}x_1+g_{i2}x_2+\ldots+g_{in}x_n+y_{2i}=\xi_{2i})\geq p_{2i}, y_{2i}\geq 0\}=$

$=\{x\in\mathbf{R}^n|\ P(y_{2i}=\xi_{2i}-g_{i1}x_1-g_{i2}x_2-\ldots-g_{in}x_n)\geq p_{2i}, y_{2i}\geq 0\}=$

$=\{x\in\mathbf{R}^n|\ P(\xi_{2i}-g_{i1}x_1-g_{i2}x_2-\ldots-g_{in}x_n\geq 0)\geq p_{2i}\}=$

$=\{x\in\mathbf{R}^n|\ P(\xi_{2i}<g_{i1}x_1+g_{i2}x_2+\ldots+g_{in}x_n)\leq p_{2i}\}=$

$=\{x\in\mathbf{R}^n|\ F(g_{i1}x_1+g_{i2}x_2+\ldots+g_{in}x_n)\leq p_{2i}\}=\{x\in\mathrm{R}^n|\ g_{i1}x_1+g_{i2}x_2+\ldots+g_{in}x_n)\leq$

$\leq F^{-1}(p_{2i})\},\ i=1,2,\ldots,m_2,$

where we note with F the probability distribution function of the random variable.

So we obtain the $K_2=G_1\cap G_2\cap\ldots\cap G_{m_2}$ set.

The determination of the determinist equivalent of probabilistic constraints of problem (3) is solved in a similar way. Hence, let be the constraints:

$P(Ax\leq\xi_1)\geq p_1$

which may be written as:

$$P\left[\begin{pmatrix} h_{11} & h_{12} & \ldots & h_{1n} \\ h_{21} & h_{22} & \ldots & h_{2n} \\ \ldots & \ldots & \ldots & \ldots \\ h_{m_1 1} & h_{m_1 2} & \ldots & h_{m_1 n} \end{pmatrix}\begin{pmatrix} x_1 \\ x_2 \\ \ldots \\ x_n \end{pmatrix}\leq\begin{pmatrix} \xi_{11} \\ \xi_{12} \\ \ldots \\ \xi_{1m_1} \end{pmatrix}\right]\geq\begin{pmatrix} p_{11} \\ p_{12} \\ \ldots \\ p_{1m_1} \end{pmatrix}$$

We consider the sets:

$H_j=\{x\in\mathbf{R}^n|\ P(h_{j1}x_1+h_{j2}x_2+\ldots+h_{jn}x_n\leq\xi_{1j})\geq p_{1j}\}=$

$=\{x\in\mathbf{R}^n|\ P(\xi_{1j} < h_{j1}x_1+ h_{j2}x_2+ \ldots + h_{jn}x_n) \le p_{1j}\}=$
$=\{x\in\mathbf{R}^n|\ F(\ h_{j1}x_1+ h_{j2}x_2+ \ldots + h_{jn}x_n) \le p_{1j}\}=$
$=\{x\in\mathbf{R}^n|\ h_{j1}x_1+ h_{j2}x_2+ \ldots + h_{jn}x_n) \le F^{-1}(p_{1j})\},\ j=1,2,\ldots, m_1.$

We obtain the $K_1= H_1\cap H_2\cap\ldots\cap H_{m_1}$

Also we determine the $K_3=\{x\in\mathbf{R}^n|\ Bx\le b, x\ge 0\}$ set.

The determination of the deterministic equivalent of the problem (1) means to obtain a deterministic vectorial programming problem with *r* objective functions. For this we will search to determine, first of all the deterministic equivalent of each objective function.

Let be problem (1) written as:

$$\text{Vmax}\quad f_k(x,\ \xi_2) = P\ [z_k(x) - q_k^{\mathrm{T}} y \ge u_k\ ],\qquad k\in I$$

subject to:

$$x\in K$$

For any $k\in I$, the objective function $f_k(x,\ \xi_2)$ is:

$$f_k(x,\ \xi_2) = P\ [z_k(x) - q_k^{\mathrm{T}} y \ge u_k\ ]= P[z_k(x)-q_{k1}(\xi_{21} - g_{11}x_1- g_{12}x_2- \ldots - g_{1n}x_n) -$$
$$-q_{k2}(\xi_{22} - g_{21}x_1- g_{22}x_2- \ldots - g_{2n}x_n) - \ldots - q_{km_2}(\xi_{2m_2} - g_{m_21}x_1- g_{m_22}x_2- \ldots - g_{m_2n}x_n) \ge u_k]$$

We note $\eta_k = q_{k1}\xi_{21} + q_{k2}\xi_{22} + \ldots + q_{km_2}\xi_{2m_2} = \eta_{k1}+\eta_{k2}+\ldots+\eta_{km_2}$,

which is also a random variable with a normal distribution which will have the following parameters:

$$\overline{\eta}_k = \overline{\eta}_{k1}+\overline{\eta}_{k2}+\ldots+\overline{\eta}_{km_2} = q_{k1}\overline{\xi}_{21} + q_{k2}\overline{\xi}_{22} + \ldots + q_{km_2}\overline{\xi}_{2m_2}$$

and

$$\sigma_{\eta_k} = \sqrt{D(\eta_k)} = \sqrt{D(\eta_{k1}) + D(\eta_{k2}) + \ldots + D(\eta_{km_2})} =$$
$$= \sqrt{q_{k1}^2 D(\xi_{21}) + q_{k2}^2 D(\xi_{22}) + \ldots + q_{km_2}^2 D(\xi_{2m_2})} = \sqrt{q_{k1}^2\sigma_{\xi_{21}}^2 + q_{k2}^2\sigma_{\xi_{22}}^2 + \ldots + q_{km_2}^2\sigma_{\xi_{2m_2}}^2}$$

We note $z_k^{'}(x) = q_{k1}g_{11}x_1 + q_{k1}g_{12}x_2 + \ldots + q_{k1}g_{1n}x_n + \ldots + q_{k2}g_{21}x_1 + q_{k2}g_{22}x_2 + \ldots + q_{k1}g_{1n}x_n + \ldots +$
$+ q_{km_2}g_{m_21}x_1 + q_{km_2}g_{m_22}x_2 + \ldots + q_{km_2}g_{m_2n}x_n$

It follows:

$$P\ [z_k(x) + z_k^{'}(x) - u_k \ge \eta_k\ ] = P\left(\frac{\eta_k - \overline{\eta}_k}{\sigma_{\eta_k}} < \frac{z_k(x) + z_k^{'}(x) - u_k - \overline{\eta}_k}{\sigma_{\eta_k}}\right) =$$
$$= \left[\Phi\left(\frac{z_k(x) + z_k^{'}(x) - u_k - \overline{\eta}_k}{\sigma_{\eta_k}}\right) + \frac{1}{2}\right]$$

where Φ is Laplace's function.

Because Φ is a strict increasing function, results that its maximum is obtained for $\max\limits_{x\in K}\left(\frac{z_k(x) + z_k^{'}(x) - u_k - \overline{\eta}_k}{\sigma_{\eta_k}}\right)$ or equivalent for max $(z_k(x) + z_k^{'}(x))$ taking into account that the others terms are constants and positives.

Hence we proved the next theorem:

Theorem 1. The minimum risk solution of the problem

$$\text{Vmax} \quad f_k(x, \xi_2) = P[z_k(x) - q_k^{\mathrm{T}} y \geq u_k], \qquad k \in I$$
$$\text{subject to:} \quad x \in K$$

is given by the linear programming problem solution

$$\max_{x \in K} \quad (z_k(x) + z_k^{'}(x)), \qquad k \in I.$$

Hence, for each $k \in I$ will find a minimum risk solution $x_k = (x_{k1}, x_{k2}, \ldots, x_{kn})$, and it remains to be found the efficient solution for those r objective functions, meaning the one which provides „the best compromise".

Are known a lot of choice criteria of the synthesis function, but we stopped at the model that minimise the distances' sum between maximum values and the values in an any x point of the objective function.:

$$F^*(x) = \min_{x \in K} \sum_{k=1}^{r} [\max_{x \in K} \Phi\left(\frac{z_k(x) + z_k^{'}(x) - u_k - \overline{\eta}_k}{\sigma_{\eta_k}}\right) - \Phi\left(\frac{z_k(x) + z_k^{'}(x) - u_k - \overline{\eta}_k}{\sigma_{\eta_k}}\right)] \qquad .(5)$$

The x^0 point in which is obtained this minimum will be the efficient point for problem(1). In the given form in (5) relation the problem can't be solved, that's why we search for an equivalent form that can be calculable. We note:

$$t_k(x) = \frac{z_k(x) + z_k^{'}(x) - u_k - \overline{\eta}_k}{\sigma_{\eta_k}}$$

For $x \in K$, the $t_k(x)$ function values set will be an interval $[a_k, b_k]$; taking into account that Laplace's function is continuous and strictly increasing, instead for the criterion from (5) relation, that mean instead of the differences between maximum of the objective function $\Phi(b_k)$ and its value in a $\Phi(t_k(x))$ point, will use $b_k - t_k(x)$, but in order to be equivalent the two relations, the function should be linear. Hence we will linearize Laplace's function on given intervals, to provide an approximation precision of probability 0,005.

Let be $\Delta = (\Delta_0, \Delta_1, \ldots, \Delta_{12})$ an equidistant partition of the [-3,3] interval, Δ=[-3; -2,5; -2;-1,5; -1; -0,5; 0; 0,5; 1; 1,5; 2; 2,5; 3]. Having this division we obtain the intervals: $I_0 = (-\infty, -3)$; I_1=[-3,-2,5); …; I_{12}=[2,5 , 3); I_{13}=[3, $+\infty$).

It is known that for a random variable X with normal distribution, with a mean m and variance σ^2 it follows that:

$P(\alpha \leq X < \beta) = F(\beta) - F(\alpha) = \Phi\left(\frac{\beta - m}{\sigma}\right) - \Phi\left(\frac{\alpha - m}{\sigma}\right)$ and using the Laplace's function table it can be determined this probability. We consider now an division $\Delta' = (\alpha = \Delta_0^{'}, \Delta_1^{'}, \ldots, \Delta_n^{'} = \beta)$. It follow that $P(\alpha \leq X < \beta) = p_1 + p_2 + \ldots + p_n$ where we note $p_i = P(\Delta_{i-1} \leq X < \Delta_i)$, $i = 1, 2, \ldots, n$.

On this base for the chosen division Δ we determine the coefficients:

$$K_i = \frac{\Phi\left(\frac{\Delta_i - m}{\sigma}\right) - \Phi\left(\frac{\Delta_{i-1} - m}{\sigma}\right)}{\Delta_i - \Delta_{i-1}}, \; i = 1, 2, \ldots, 12, \qquad (6)$$

$$K_0=\frac{\Phi\left(\frac{\Delta_0-m}{\sigma}\right)-\Phi\left(\frac{-\infty-m}{\sigma}\right)}{\Delta_0-(-\infty)}=0, \qquad K_{13}=\frac{\Phi\left(\frac{\infty-m}{\sigma}\right)-\Phi\left(\frac{\Delta_{12}-m}{\sigma}\right)}{\infty-\Delta_{12}}=0.$$

We agree to say that I_s is a significant interval for Laplace's function if $K_s \geq 0{,}01$, s=0,1,2,…,13.

In *table* 1 are written the values $\Phi(I_s)$ and K_s for every real value which $t_k(x)$ can take, taking into account the chosen Δ division.

Table 1

$t_k(x)$	$-\infty$	-3	-2,5	-2	-1,5	-1	-0,5	0	0,5	1	1,5	2	2,5	3	$+\infty$
Δ		Δ_0	Δ_1	Δ_2	Δ_3	Δ_4	Δ_5	Δ_6	Δ_7	Δ_8	Δ_9	Δ_{10}	Δ_{11}	Δ_{12}	
I_s	I_0	I_1	I_2	I_3	I_4	I_5	I_6	I_7	I_8	I_9	I_{10}	I_{11}	I_{12}	I_{13}	
$\Phi(I_s)$	0,0014	0,005	0,015	0,045	0,09	0,15	0,19	0,19	0,15	0,09	0,045	0,015	0,005	0,0014	
K_s	0	0,01	0,03	0,09	0,18	0,30	0,38	0,38	0,30	0,18	0,09	0,03	0,01	0	

Let be $[a_k, b_k]$, k=1,2,…,r the codomain of the function $t_k(x)$, $x \in K$, $a_k \in I_{s_0^k}$ şi $b_k \in I_{s_1^k}$ and we note

$a_k = v_0^k$, $\Delta_{s_0^k} = v_1^k$, $\Delta_{s_0^k+1} = v_2^k$, …, $\Delta_{s_0^k+l_k-1} = v_{l_k}^k$, $b_k = v_{l_k+1}^k$, $l_k = s_1^k - s_0^k$,

$s_0^k, s_1^k \in \{0,1,2,\ldots,13\}$, $s_0^k < s_1^k$.

Let be x^0 the efficient solution of problem (5); this belongs to a certain I_s, interval s=0,1,2,…,13, which has a certain length and whom a $\Phi(I_s)$ value correspond , therefore we consider :

- E_0^k is the event that the solution to belong to an interval of length $v_1^k - a_k$,
- E_1^k is the event that the solution should be on an interval of length $v_2^k - v_1^k$
- E_2^k is the event that the solution should be on an interval of length $v_3^k - v_2^k$

.

.

.

- $E_{l_k}^k$ is the event that the solution should be on an interval of length $b_k - v_{l_k}^k$.

The probabilities of those events are:

$$P(E_0^k)=\frac{v_1^k-a_k}{b_k-a_k}, \quad P(E_{l_k}^k)=\frac{b_k-v_{l_k}^k}{b_k-a_k}, \quad P(E_i^k)=\frac{v_{i+1}^k-v_i^k}{b_k-a_k}, \qquad i=1,2,\ldots,l_k\text{-}1. \tag{7}$$

We consider :

- F_0^k is the event that the interval $[t_k(x), v_1^k)$ should be included in $I_{s_0^k}$
- F_1^k is the event that the interval $[t_k(x), v_2^k)$ should be included in $I_{s_0^k+1}$
- F_2^k is the event that the interval $[t_k(x), v_3^k)$ should be included in $I_{s_0^k+2}$

.
.
.

- $F^k_{l_k-1}$ is the event that the interval $[t_k(x),\ v^k_{l_k})$ should be included in $I_{s^k_0+l_k-1}$
- $F^k_{l_k}$ is the event that the interval $[t_k(x),\ b_k)$ should be included in $I_{s^k_1}$.

Taking into account the (6) relation, probabilities of these events are:

$$(v^k_1 - t_k(x))\,K_{s^k_0},\ \ (v^k_2 - t_k(x))\,K_{s^k_0+1},\ \ \dots\ ,\ (v^k_{l_k+1} - t_k(x))\,K_{s^k_0+l_k} \tag{8}$$

We consider incompatible events:

A^k_0 is the event that x^0 should belong the interval $[t_k(x),\ v^k_1)$,

A^k_1 is the event that x^0 should belong the interval $[t_k(x),\ v^k_2)$,

.
.
.

$A^k_{l_k}$ is the event that x^0 should belong the interval $[t_k(x), b_k)$.

Hence: $A^k_0 = E^k_0 \cap F^k_0$, $A^k_1 = E^k_1 \cap F^k_1$, … , $A^k_{l_k} = E^k_{l_k} \cap F^k_{l_k}$, k=1,2,…,r, $l_k = s^k_1 - s^k_0$.

For this event the probabilities will be:

$$P(A^k_{m-1}) = P(E^k_{m-1})P(F^k_{m-1}) = (v^k_m - t_k(x))\,K_{s^k_0+m-1}\,\frac{v^k_m - v^k_{m-1}}{b_k - a_k},\ m=1,2,\dots,l_k. \tag{9}$$

We introduce the compatible events:

B^k_0 is the event that x^0 should belong the interval $[v^k_1, b_k)$,

B^k_1 is the event that x^0 should belong the interval $[v^k_2, b_k)$,

.
.
.

$B^k_{l_k-1}$ is the event that x^0 should belong the interval $[v^k_{l_k}, b_k)$.

For this events results that:

$$P(B^k_0) = \Phi(b_k) - \Phi(v^k_1) = \Phi(I_{s^k_0+1}) + \Phi(I_{s^k_0+2}) + \dots + \Phi(I_{s^k_0+l_k})$$

$$P(B^k_1) = \Phi(b_k) - \Phi(v^k_2) = \Phi(I_{s^k_0+2}) + \dots + \Phi(I_{s^k_0+l_k}) \tag{10}$$

.
.
.

$$P(B^k_{l_k-1}) = \Phi(b_k) - \Phi(v^k_{l_k}) = \Phi(I_{s^k_0+l_k}).$$

where $\Phi(I_{s^k_0+l_k}) = \Phi(b_k) - \Phi(v^k_{l_k})$.

We note $V^k_0 = (A^k_0 \cup B^k_0)$, $V^k_1 = (A^k_1 \cup B^k_1)$, …, $V^k_{l_k-1} = (A^k_{l_k-1} \cup B^k_{l_k-1})$, $V^k_{l_k} = (A^k_{l_k})$

using Poincaré's formula, after reordering of the terms, results:

$$\Phi(b_k) - \Phi(t_k(x)) = (V_0^k \cup V_1^k \cup \ldots \cup V_{l_k}^k) = \tag{11}$$

$$= P(A_0^k \cup B_0^k \cup A_1^k \cup B_1^k \cup \ldots \cup A_{l_k-1}^k \cup B_{l_k-1}^k \cup A_{l_k}^k) =$$

$$= P(A_0^k \cup A_1^k \cup \ldots \cup A_{l_k}^k \cup B_0^k \cup B_1^k \cup \ldots \cup B_{l_k-1}^k) =$$

$$= P(A^k \cup B^k) = P(A^k) + P(B^k) - P(A^k)\,P(B^k)$$

where we noted : $A^k = A_0^k \cup A_1^k \cup \ldots \cup A_{l_k}^k$, $B^k = B_0^k \cup B_1^k \cup \ldots \cup B_{l_k-1}^k$, A^k and B^k being compatible events.

Knowing that $A_0^k, A_1^k, \ldots, A_{l_k}^k$ are incompatible events , and $B_0^k, B_1^k, \ldots, B_{l_k-1}^k$ are compatible, the relation (11) becomes:

$$\Phi(b_k) - \Phi(t_k(x)) = P(A_0^k) + P(A_1^k) + \ldots + P(A_{l_k}^k) + P(B_0^k) + P(B_1^k) + \ldots + P(B_{l_k-1}^k) - \tag{12}$$

$$- \sum_{\substack{i,j=0 \\ i \neq j}}^{l_k-1} P(B_i^k \cap B_j^k) - \sum_{\substack{i,j,p=0 \\ i \neq j \neq p}}^{l_k-1} P(B_i^k \cap B_j^k \cap B_p^k) - \ldots - (-1)^{l_k-1} P\Big(\bigcap_{q=0}^{l_k-1} B_q^k\Big) - P(A^k)\,P(B^k) =$$

$$= \sum_{m=1}^{l_k} (v_m^k - t_k(x))\, K_{s_0^k+m-1} \frac{v_m^k - v_{m-1}^k}{b_k - a_k} + \sum_{u=0}^{l_k-1} \sum_{q=u}^{l_k-1} \Phi(I_{s_0^k+q+1}) -$$

$$- \sum_{\substack{i,j=0 \\ i \neq j}}^{l_k-1} P(B_i^k \cap B_j^k) - \sum_{\substack{i,j,p=0 \\ i \neq j \neq p}}^{l_k-1} P(B_i^k \cap B_j^k \cap B_p^k) - \ldots - (-1)^{l_k-1} P\Big(\bigcap_{q=0}^{l_k-1} B_q^k\Big) - P(A^k)\,P(B^k)$$

Replacing in this formula the terms with their corresponding values, given by (10),(11) we calculate the values of the $\Phi(b_k) - \Phi(t_k(x))$, $k = 1,2, \ldots, r$.

Considering the relation (5) and taking into account the things presented previously , we proved :

Theorem 2. Problem (1) is equivalent with the following linear programming problem:

$$F^* = \min_{x \in K} \sum_{k=1}^{r} \Bigg[\sum_{m=1}^{l_k} (v_m^k - t_k(x))\, K_{s_0^k+m-1} \frac{v_m^k - v_{m-1}^k}{b_k - a_k} + \sum_{u=0}^{l_k-1} \sum_{q=u}^{l_k-1} \Phi(I_{s_0^k+q+1}) - \tag{13}$$

$$- \sum_{\substack{i,j=0 \\ i \neq j}}^{l_k-1} P(B_i^k \cap B_j^k) - \sum_{\substack{i,j,p=0 \\ i \neq j \neq p}}^{l_k-1} P(B_i^k \cap B_j^k \cap B_p^k) - \ldots - (-1)^{l_k-1} P\Big(\bigcap_{q=0}^{l_k-1} B_q^k\Big) - P(A^k)\,P(B^k)\Bigg]$$

In this form the synthesis function is calculable and we obtain after replacing the values, a linear programming problem whose solution is efficient solution for (1), and for the x^0 point we can calculate the maximum of each objective function.

APPLICATION

In a factory are manufactured two types of products P_1 and P_2 in whose composition are included raw materials M_1, M_2, M_3 şi M_4 in the amounts indicated in *table* 1. The maximum amounts that can be assured for the raw materials M_1, M_2 and M_3 are random variables normally

distributed: $\xi_1(12,2)$ for M_1, $\xi_{21}(7,2)$ for M_2 and $\xi_{22}(18,3)$ for M_3 are quantities which depend by the possibilities of delivery of the provider. For a good tide of production is required that the probabilities that the necessary of raw materials M_1, M_2 and M_3 to be lower or equal than the delivered quantities, to be at least 0,2 , 0,4 and 0,6. The necessary quantity of raw material M_4 should be maximum of 18 units.

We have to establish the quantity of each product P_1 and P_2 so that the probability of currency benefit to be at least 75 units to be maximum, and the probability that total benefit should be least 65 units to be also maximum, the values of these benefits for an unit of product are to be found in the *table* 2 and knowing that are penalised as follows:

- the currency benefit decreases with one currency unit for each undelivered in time unit from the raw material M_2 which composes P_1 product, and two currency unit for raw material M_2 and P_2 product;
- the total benefit decreases with two units for every undelivered time unit from raw material M_1 which composes P_1 product, and one unit for raw material M_1 and P_2 product.

Table 2

		Raw materials				Currency benefit	Total benefit
		M_1	M_2	M_3	M_4		
Products	P_1	3	1	3	1	9	7
	P_2	1	1	2	3	9	9

- Solving -

The problem has the next form:

$$\text{Vmax } f_1(x, \xi_2) = P(9x_1+9x_2 - q_1^{\mathrm{T}} y_2 \geq 75)$$
$$\text{Vmax } f_2(x, \xi_2) = P(7x_1+9x_2 - q_2^{\mathrm{T}} y_2 \geq 65)$$
subject to:
$$\begin{cases} P(3x_1+x_2 \leq \xi_1) \geq 0{,}2 \\ \mathrm{P}\left[\begin{pmatrix}1 & 1\\ 3 & 2\end{pmatrix}\begin{pmatrix}x_1\\ x_2\end{pmatrix}+\begin{pmatrix}1 & 0\\ 0 & 1\end{pmatrix}\begin{pmatrix}y_{21}\\ y_{22}\end{pmatrix}=\begin{pmatrix}\xi_{21}\\ \xi_{22}\end{pmatrix}\right] \geq \begin{pmatrix}0{,}4\\ 0{,}6\end{pmatrix} \\ x_1+3x_2 \leq 18 \\ x \geq 0, y \geq 0 \end{cases} \quad (14)$$

We determine the $K=K_1 \cap K_2 \cap K_3$ set.

$K_2=\{x \in \mathbf{R}^n \mid P(x_1+x_2+y_{21}=\xi_{21}) \geq 0{,}3\ ,\ P(3x_1+2x_2+y_{22}=\xi_{22}) \geq 0{,}6\ , y_{21} \geq 0, y_{22} \geq 0\}=$

$=\{x \in \mathbf{R}^n \mid P(\xi_{21} < x_1+x_2) \leq 0{,}7\ , P(\xi_{22} < 3x_1+2x_2) \leq 0{,}4\ \}=$

$=\{x \in \mathbf{R}^n \mid F(x_1+x_2) \leq 0{,}7\ , F(3x_1+2x_2) \leq 0{,}4\ \}=\{x \in \mathbf{R}^n \mid x_1+x_2 \leq F^{-1}(0{,}7)\ ,\ 3x_1+2x_2 \leq$

$\leq F^{-1}(0{,}4)\}=\{x \in \mathbf{R}^n \mid x_1+x_2 \leq 0{,}5+7\ ,\ 3x_1+2x_2 \leq -0{,}3+18\}=$

$=\{x \in \mathbf{R}^n \mid x_1+x_2 \leq 7{,}5\ ,\ 3x_1+2x_2 \leq 17{,}7\}.$

$K_1=\{x \in \mathbf{R}^n \mid P(3x_1+x_2 \leq \xi_1) \geq 0{,}2\ , x \in K_2, x \geq 0\}=\{x \in \mathbf{R}^n \mid P(\xi_1 < 3x_1+x_2) \leq 0{,}8\ , x \in K_2, x \geq 0\}=$

$=\{ x\in\mathbf{R}^n \mid F(3x_1+x_2) \le 0{,}8\ , x\in K_2, x\ge 0\}=\{ x\in\mathbf{R}^n \mid 3x_1+x_2 \le F^{-1}(0{,}8)\ , x\in K_2, x\ge 0\} =$
$=\{ x\in\mathbf{R}^n \mid 3x_1+x_2 \le 12{,}8\ \ , x\in K_2, x\ge 0\}$

$K_3=\{x\in\mathbf{R}^n \mid x_1+3x_2\le 18\}$

K is obtained by solving the system :

$$\begin{cases} x_1+x_2 \le 7{,}5 \\ 3x_1+2x_2 \le 17{,}7 \\ 3x_1+x_2 \le 12{,}8 \\ x_1+3x_2\le 18 \\ x_1\ge 0 \\ x_2\ge 0 \end{cases}$$

We determine the deterministic equivalent of the two objective function and let be the first out of them:

$$\text{Vmax } f_1(x,\ \xi_2)= P(9x_1+9x_2-q_1^{\mathrm{T}} y_2 \ge 75); \qquad (15)$$

$$q_1^{\mathrm{T}} y_2=(\,q_{11}\quad q_{12}\,)\begin{pmatrix} y_{21} \\ y_{22}\end{pmatrix}=(1\ \ 2)\begin{pmatrix} \xi_{21}-\ x_1-\ x_2 \\ \xi_{22}-3x_1-2x_2\end{pmatrix}= \quad \xi_{21}\text{-}x_1\text{-}x_2+2\,\xi_{22}\text{-}6x_1\text{-}4x_2=$$

$= -7x_1-5x_2+\xi_{21}+2\,\xi_{22}$;

We note $\eta_1=\eta_{11}+\eta_{12}$ where $\eta_{11}=\xi_{21}$, $\eta_{12}=2\,\xi_{22}$.

We calculate the parameters of this random variable:

$$\overline{\eta}_1 = M(\eta_{11}+\eta_{12}) = M(\xi_{21}) + M(2\xi_{22}) = \overline{\xi}_{21} + 2\overline{\xi}_{22} = 7+2\cdot 18 = 43$$

$$\sigma_{\eta 1} = \sqrt{D(\eta_1)} = \sqrt{D(\eta_{11})+D(\eta_{12})} = \sqrt{q_{11}^2 D(\xi_{21}) + q_{12}^2 D(\xi_{22})} = \sqrt{q_{11}^2\sigma_{\xi_{21}}^2 + q_{12}^2\sigma_{\xi_{22}}^2} =$$

$$= \sqrt{1\cdot 4+4\cdot 9} = \sqrt{40} = 6{,}325$$

We replace in (15) the determined values and we obtain:

$\underset{x\in K}{\text{Vmax}}\ f_1(x,\ \xi_2)= P[9x_1+9x_2-(-7x_1-5x_2+\xi_{21}+2\,\xi_{22})\ge 75]= P(16x_1+14x_2-\xi_{21}$ -

$-2\,\xi_{22}\ge 75)= P(16x_1+14x_2-\eta_1\ge 75) = P(16x_1+14x_2-75\ge \eta_1)=$

$$= P\left(\frac{\eta_1-\overline{\eta}_1}{\sigma_{\eta_1}} \le \frac{16x_1+14x_2-75-\overline{\eta}_1}{\sigma_{\eta_1}}\right)=\left[\Phi\left(\frac{16x_1+14x_2-118}{6{,}326}\right)+0{,}5\right]$$

Maximum of this function is obtained, according to theorem 1 for problem's solution.

$$\max_{x\in K}\ (16x_1+14x_2) \qquad (16)$$

Solving (16) is obtained $\max\limits_{x\in K}(16x_1+14x_2)=110{,}3$ for $x_1=2{,}65$ and $x_2=4{,}85$.

and results:

$$\underset{x\in K}{\text{Vmax}}\ f_1(x,\ \xi_2)=\Phi\left(\frac{110{,}3-118}{6{,}325}\right)+0{,}5=\Phi(-1{,}217)+0{,}5=-0{,}388+0{,}5=0{,}112$$

Calculating the minimal and maximal value of the term $t_1(x)=\dfrac{16x_1+14x_2-118}{6{,}326}$ we obtain a_1=-18,6 ;b_1= -1,217. a_1 value was obtained in $x_1=x_2=0$.

We determine the deterministic equivalent of the second objective function:

$$\underset{x\in K}{\text{Vmax}}\, f_2(x,\ \xi_2)=\ P(7x_1+9x_2-q_2^{\mathrm{T}}y_2\geq 65); \tag{17}$$

where

$$q_2^{\mathrm{T}}y_2=(\,q_{21}\quad q_{22}\,)\begin{pmatrix}y_{21}\\ y_{22}\end{pmatrix}=(2\ \ 1)\begin{pmatrix}\xi_{21}-\ x_1-\ x_2\\ \xi_{22}-3x_1-2x_2\end{pmatrix}=\quad 2\,\xi_{21}\text{-}2x_1\text{-}2x_2+\xi_{22}\text{-}3x_1\text{-}2x_2$$

$$=\text{-}5x_1\text{-}4x_2+2\,\xi_{21}+\xi_{22}$$

Replacing in (17) we obtain:

$$\underset{x\in K}{\text{Vmax}}\, f_2(x,\ \xi_2)=P(12x_1+13x_2\text{-}2\,\xi_{21}\text{-}\xi_{22}\geq 65)=\ P(12x_1+13x_2\text{-}\eta_2\geq 65)= \tag{18}$$

$$=\ P(\,\eta_2\leq 12x_1+13x_2\text{-}65)$$

Using the same relations as for the first objective function we obtain: $\overline{\eta}_2=32$; $\sigma_{\eta_2}=5$, and (18) becomes

$$\underset{x\in K}{\text{Vmax}}\, f_2(x,\ \xi_2)=P\left(\frac{\eta_2-\overline{\eta}_2}{\sigma_{\eta_2}}<\frac{12x_1+13x_2-65-\overline{\eta}_2}{\sigma_{\eta_2}}\right)=\left[\Phi\left(\frac{12x_1+13x_2-97}{5}\right)+0{,}5\right]$$

whose maximum is obtained for problem' solutions:

$$\max_{x\in K}\ (12x_1+13x_2) \tag{19}$$

Solving (19) we obtain $\max_{x\in K}\ (12x_1+13x_2)=95{,}25$ for $x_1=2{,}25$ and $x_2=5{,}25$.

and result that:

$$\underset{x\in K}{\text{Vmax}}\, f_2(x,\ \xi_2)=\Phi\left(\frac{95{,}25-97}{5}\right)+0{,}5=\Phi(-0{,}35)+0{,}5=-0{,}137+0{,}5=0{,}363$$

having $a_2=$ -19,4 ; $b_2=$ -0,35.

From (7)-(12) relations and theorem 2, we calculate the efficient solution of (14):

For f_1 function in according with (11) results

$\Phi(b_1)-\Phi(t_1(x))=P(A^1)+P(B^1)\text{-}P(A^1)P(B^1)$ where:

$$P(A^1)=(\text{-}3\text{-}\frac{16x_1+14x_2-118}{6{,}325})\frac{15{,}6}{17{,}383}\cdot 0+(\text{-}2{,}5\text{-}\frac{16x_1+14x_2-118}{6{,}325})\frac{0{,}5}{17{,}383}\,0{,}01+$$

$$+(\text{-}2\text{-}\frac{16x_1+14x_2-118}{6{,}325})\frac{0{,}5}{17{,}383}\,0{,}03+(\text{-}1{,}5\text{-}\frac{16x_1+14x_2-118}{6{,}325})\frac{0{,}5}{17{,}383}\,0{,}09+(\text{-}1{,}217\text{-}$$

$$\text{-}\frac{16x_1+14x_2-118}{6{,}325})\frac{0{,}283}{17{,}383}\,0{,}18.$$

$P(B^1)=(0{,}06+0{,}19+0{,}11)+(0{,}19+0{,}11)+0{,}11\text{-}(0{,}19+0{,}11)\text{-}0{,}11\text{-}0{,}11\text{-}0{,}11=0{,}14.$

and we obtain:

$$\Phi(b_1)-\Phi(t_1(x))=P(A^1)+P(B^1)\text{-}P(A^1)P(B^1)=\text{-}\frac{16x_1+14x_2-118}{6{,}325}\,0{,}048+0{,}2807.$$

For f_2 follow that:

$$P(A^2)=(\text{-}3\text{-}\frac{12x_1+13x_2-97}{5})\cdot\frac{16{,}4}{19{,}05}\,0+(\text{-}2{,}5\text{-}\frac{12x_1+13x_2-97}{5})\frac{0{,}5}{19{,}05}\,0{,}01+(\text{-}2\text{-}$$

$$\text{-}\frac{12x_1+13x_2-97}{5})\frac{0{,}5}{19{,}05}\,0{,}03+(\text{-}1{,}5\text{-}\frac{12x_1+13x_2-97}{5})\frac{0{,}5}{19{,}05}\,0{,}09+(\text{-}1\text{-}$$

$$-\frac{12x_1+13x_2-97}{5})\cdot\frac{0,5}{19,05}0,18+(-0,5-\frac{12x_1+13x_2-97}{5})\frac{0,5}{19,05}0,3+(-0,35-$$

$$-\frac{12x_1+13x_2-97}{5})\frac{0,15}{19,05}0,38=-\frac{12x_1+13x_2-97}{5}0,0191-0,0141.$$

$P(B^2) = 0,1428.$

$$\Phi(b_2)-\Phi(t_2(x)) = -\frac{12x_1+13x_2-97}{5}0,016+0,131.$$

The efficient solution is given by linear programming problem's solution:

$$F^*=\min_{x\in K}[\Phi(b_1)-\Phi(t_1(x))+\Phi(b_2)-\Phi(t_2(x))]=\min_{x\in K}[-\frac{16x_1+14x_2-118}{6,325}0,048+0,2807-$$

$$-\frac{12x_1+13x_2-97}{5}0,016+0,131]=\min_{x\in K}(-1,9812x_1-1,7415x_2+14,9191)$$

Solving the problem, we obtain the solution x=(2,65; 4,85)

We determine for the two objective functions the maximum values which are obtained in the point x=(2,65;4,85):

$$f_1(x)=\Phi(-1,217)+0,5=-0,388+0,5=0,112$$

$$f_2(x)=\Phi(\frac{12\cdot 2,65+13\cdot 4.85-97}{5})+0,5=\Phi(0,43)+0,5=0,667$$

REFERENCES

- Ciucu D., Craiu V., Ştefănescu M.V., Ştefănescu A., *Statistică matematică şi cercetări operaţionale*, Editura didactică şi pedagogică,1982.
- Charnes A., Kirby M., Some special P-model in chance-constrained programming, Management Science 14(1966),p.183-195.
- Everitt R. and Ziemba W.T., Two-period stochastic programs with simple recourse, Oper. Res. 27(1979),p.485-502.
- Frauendorfer K., *Stochastic Two-Stage Programming*,vol.392(1992) of Lecture Notes in Econ, Math. Syst. Springer Verlag,Berlin
- Geoffrion A.M., Proper efficiency and the theory of vector maximization, J.M.A.A. 22,3 (1968),p.618-630.
- Kall P., Wallace S.W., *Stochastic programming*, John Wiley & Sons,1994.
- Kataoka S., *A stochastic programming model*, Econometrica 31(1963), p.181-196.
- Prékopa A., *Stochastic programming*, Akadémiai Kiadó, Budapest,1995.
- Stancu-Minasian I.M., Programarea stochastică cu mai multe funcţii obiectiv, Editura Academiei R.S.R., Bucureşti 1980.
- Stancu-Minasian I.M., Ţigan S., The minimum-risk approach to special problems of mathematical programming. The distribution function of the optimal value, Rev. Anal. Numer. Theor. Approx., 13,2 (1984),p.175-187.
- Wets R.J.B., Programming under uncertainty the equivalent convex program, Siam J. Appl. Math. 14,No.1(1966),p. 1143-1151.
- Wets R.J.B., Stochastic programming with fixed recourse: the equivalent deterministic *program*, SIAM Review 16, No.3 (1974),p.309-339.

THE LEVEL OF PROFESSIONALISM OF THE PROFESSIONAL'S PERSONALITY AS THE MAIN FACTOR OF HIS COMPETITIVENESS

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Abstract: *The author defines the essence of the concept professionalism, clarifies its composition, determines personal traits, knowledge and skills that are essential for the competitiveness of a specialist*

Keywords: culture, personality of a specialist, level of professionalism, competitiveness, competitive personality

JEL (Journal of Economic Literature) Classification:
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Modern development of a market economy has created a fundamentally new situation in the field of higher education and urged closer exploration of professional level of specialists. Now there is a problem before the vocational education system how not only to increase the level of professionalism significantly but to prepare a specialist for success activity and opportunities to work efficiently in a few years. This very condition would contribute to his competitiveness.

Many native and foreign scientists worked on the problem of professionalism.

Recently there has been a tendency to search for different approaches, mechanisms and aspects of competitiveness in education, including graduates in the labor market. But these studies are usually related with specific areas of training and issues of professional competence formation (M.V. Vachevskiy, L.M. Dybkova, L. G. Karpova, G. Kopil, V.A. Kostenko, V.A. Petruk, N.V. Ujsimbaeva etc.)., teaching and learning activities (G.I. Kostishyna, S.M. Kustovskiy, O.M. Sernyak etc..), training (A. G. Androshchuk, L. Vlodarska-Zola, O.I. Kulish, O.M. Lapuzina, O.I. Moskaliuk, E. Neroba, O.V. Shupta, L.B. Shcherbatiuk etc..), readiness to professional activity (A.V. Boiko, O.P. Demchenko, S.O. Dotsenko, L.A. Goncharenko, V.V. Ivanova, M.V. Karchenkova, O.A. Makarenko, V.I. Plisko , G.O. Savchenko, T. V. Shestakova and others), adaptation to professional activity (Ya.V. Absalyamova, S.O. Gura, L.V. Zdanevich, T.A. Kukharchuk, I.I. Obles, S.M. Khatuntseva, V.O. Tsybulko, N.P. Shaposhnikova etc.).

But the problems associated with the level of professionalism of specialists in the context of their competitiveness were given insufficient attention, and that's why the goal of our study is to clarify the components of competitiveness of a specialist, identify key knowledge, skills and qualities that are a part of professionalism and to clarify the content of this concept.

Current trends in the labor market require constant dynamic compliance between the level of professionalism and the changes in society. It will provide professional growth and the ability to be in demand. Therefore, the goal of higher education is to create a level of training that meets the requirements of socio-economic environment.

Anishchenko V.M. defines professionalism as a combination of knowledge, skills, behaviors and actions that demonstrate training, learning, suitability of a person to perform professional functions. If we consider the pedagogical nature of this concept, it is seen in the formation of readiness for competent performance of actions in the process of training and practice. Plasticity of skills, providing regulation and restructuring of the entire activity appears

in it.

Considering the correlation between "activity" and "personality" we agree with many scientists that these concepts are inextricably linked. Personality shapes its activities. In our case we are talking about manager's personality and his professional activity.

The problems of activity were considered by many scientists, among which we may mention L. Vygotskiy, A.N. Leontiev, S. Rubinshtein, A. Petrovskiy, V. Kremen, O. Yatsenko, V. Andrushchenko, V. Bibler, V.A. Kozakov. They suggest that the main psychological properties of activity are awareness, activity, commitment, objectivity and consistency. The main characteristics of human activity are the motive, purpose, object, structure and means. Motive of activity is what motivates it, for what it is needed. Purpose of activity is its product. Object is something with what this activity deals directly. Structural components of the activity are such psychological formations as goals, motivation, information relations, influence (is for informational purposes only). Operation of information between parts of the system (elements) brings to the relationship of the elements inside and outside the system. The levels of the system organization are determined by extent of functioning information and its quality. Informational addressing in the system and intersystem plan determines the existence of control systems. Means of the activity realization for humans are the tools that they use for performance of certain actions or transactions.

Due to professional activity we can identify our aspirations and skills that will indicate the ability to do the work that usually is confided to managers. And their success rates in this case are material compensation, career growth and respect of colleagues and managers.

At the time Maslow pointed out the inextricable link between personality and professional activity, noting that in the process of labor, which occurs in certain socio-economic conditions not only some of the functional systems and mental processes of a person are formed (professional perception, memory , thinking, etc.), but also his personality, which leads to the formation of social and professional personality type with defined value orientations, conduct, characteristics of intergroup and innergroup communication, etc. [8].

Professional activity is a form of social activity of people who have social and political conduct. That is to protect the interests of the state. In the narrow sense professional activity is the process of performance of tasks by a specialist peculiar to his work. Therefore, it is clear that the level of formation and personality development of a manager, his professional and personal qualities are leading factor in his profession. The higher the level of professional and personal qualities of the specialist, the more effective, proactive and creative is his professional activity, which in its turn will enhance specialist's credibility among colleagues, employees and managers, as well as his self-esteem.

Analysis of the results of scientific research suggests that the concept of professionalism is much more developed than the concept of competitiveness in domestic pedagogy. In addition, the vast majority of scientific research does not take into account the fundamental requirement of today. That's a customer satisfaction as the main criterion of quality of educational activity.

Relevance of the competitiveness of a specialist formation is that the labor market, which is in a state of dynamic development and "market of personalities" have their high demands. Social responsibility, adequate perception and mobile response to new factors, autonomy and efficiency in decision-making, commitment to democratic communication and to social activism, the ability of quick adaptation to new conditions and other qualities that determine the competitiveness of personality are gaining a greater weight today.

Competitive specialist is regarded as a product of the educational institution, and as a person who has certain qualities, can achieve good results in his work and contribute to the achievement of the organization where he works. Recent studies show that there is no single generally recognized definition of "competitive". It is characterized with different aspects and

different completeness.

There are several basic approaches to determining the essence of competitiveness of a specialist.

One common approach examines competitiveness of a specialist [2] as both relative and generalized description that reflects certain favorable differences between him and other competitor expert by the degree of customer satisfaction (employer) and by the size of the cost to satisfy them.

D.P. Boginya defines competitiveness as the set of high-quality and cost characteristics of a specific commodity "labor" that provides specific needs of employers, including state enterprises, employees of certain qualifications (profession) [3].

Considering the above said, competitiveness of a specialist in any field of activity is defined by personality traits, including professional and personal, by the quality of activity and its potential. Adaptive ability and desire to succeed occupy a special place among the major signs of competitiveness of a specialist.

Realizing success as a positive consequence of work, significant achievements, luck, talent it becomes apparent that competitive person builds his own behavior, trying to win the competition with others, to achieve the goal, take the most meaningful place in society.

As for adaptive abilities M. J. Variy rightly notes that competitive personality is a person who is able to quick and painless adaptation to constant changes in the social conditions of scientific and technological progress and new activities and forms of communication while maintaining a positive internal psychoenergetic potential and harmony [4].

Thus, the functional essence of the concept "competitive personality" reveals those individual characteristics of a person, on which the success of the implementation of certain activities that provide its advantages depends in comparison with others in professional and live plan.

Educational essence of competitiveness, in our view, is to consider it as a complex, multi-layered integrated quality that allows the individual according to his individual abilities, interests and needs to participate and take advantage of competitive relations in the chosen field of a profession activity. Obviously, in the context of the pedagogical nature of the competitiveness of a specialist it needs to be explored and, most importantly, built on the level of personal qualities (mobility, adaptability, communicativeness, independence, commitment, values and attitudes, social memory, critical thinking, the ability to self-development, self-education, social mobility); on the level of performance (reflexivity, creativity, projectivity, forecasting, goal-setting, flexibility, plasticity) on the level of the transformation processes of personality, activity and environment.

Along with the theoretical definition there’s a practical task of organizing qualities of professional competitiveness as it relates to sociocultural and personal self-improvement of a human. Scientists include professional, psychological and individual characteristics, educational, industrial and social qualities, individual skills, value orientations, professional competence and qualifications to the structure of competitiveness of personality.

According to the priorities for the allocation of competences, which are based on the current requirements for competitive person that has experience in his field, as well as to those leading competencies that were identified by researchers as necessary for the modern professional, let’s consider the range of knowledge and skills that are considered basic for such person.

First of all, we suggest considering psychological and pedagogical knowledge and skills. They lie in the organization of common activity, cooperation, communication of people, preventing and resolving conflicts, training and staff development, solving social and educational problems in the workplace, promoting and ensuring their own personal and professional growth

throughout life, creativity, family life and humane upbringing of children in the family, their full development [73, p.103].

Young people traditionally perceived values of the older generation as the highest achievements of culture [274, p.63]. Today most people of college age tend to self-expression and self-reliance in the choice, including the value orientations. The study among 120 engineering students of NTU "KhPI" showed that 55% of respondents are aware of the value norms that exist in society, perceive them adequately, but the priority is determined independently from the influence of the older generation. Sociocultural component contributes to the social protection of young people in conditions of fast change, renewal of professional development, learning of such types of professional activities that allow you to work in conditions of innovative changes.

Given life and socio-economic situation, characterized by instability the issue of continuity of valuable components of culture between generations while being questioned, although in fact it exists and reproduced in practice is been asked [158, p. 56]. Heredity as one of general principles provides an organic link between the different stages of development and deepens the specialist's knowledge, acquired in the previous stages of education, makes certain ideas and concepts of students a coherent set of knowledge and skills [316, p.3]. Broadcast of the complex of common social information to every new generation, mastering what is called social relevance and cultural competence of the individual passed it by raising the educational level of a specialist. Necessary objective connection between the new and the old in the development process is needed [317, p.68]. Young people who will strive to explore the past, will perceive the present better, simulate the future more confidently. Each new generation draws its norms and principles of the ideology and culture of the society from the experience of previous generations. This affects the future specialist's own experience. Preservation of heredity and broadcast of any kind of experience is solved by socio-cultural competence formation.

Graduates of technical universities need to understand the social context, defining objectives, goals, principles and methods of engineering activity. Knowing the place and role of their profession in society, a sense of responsibility for the implementation of projects and procedures of the activity is an element of professionalism in any case. Specialist faces the task of the competent assessment of social impact and perspectives of his professional activity from the standpoint of safety of human existence, harmonious interaction with the natural environment [176, p.42].

The regulatory component takes not least place: possession of a code of perfectly cultural norms, knowledge of the socio-cultural context of professional, national, behavioral etiquette and professional standards.

Others add to the content the knowledge, skills and practical experience of tolerant attitude towards other cultures, impartiality to information; ideological neutrality, life orientation and practical orientation; development of empathy considering a specific multicultural audience.

According to Ukrainian psychologist V. Tretyachenko such personality traits are important for competitiveness as adaptive mobility (the role and place of the individual in interpersonal interaction in small social groups, its status, position in the structure of business relationships, the ability to withstand the destabilizing impact of negative behaviors, etc.) the ability to integrate social functions (adaptation of the individual behavior to role expectations of other group members, the ability to be informal and emotional leader and administrator), communicativeness, resistance to stress [5].

We consider important for constant dynamics of professional level of a specialist, which is one of the main factors of competitiveness the following personality traits:

1) vision and understanding of his goals, their subsequent adjustment and ways for achievement (i.e. to think and act socially mature in a professional life, to give preference to

internal locus of control during the comprehension of his actions), 2) the ability to motivate others to actions and gain people's trust that is to be a leader, and 3) ability to communicate intelligently and build interpersonal interaction in professional activities, and 4) the ability to complex and hard labor in shortage of time, the ability to act decisively in stressful situations and to plan activities in accordance with properly priorities; 5) the ability to feel, see and stay ahead of the problems, finding different ways to solve them, 6) social adaptability, which is in the lability of communicative activities, decision rules, traditions and culture of the team, which manager works with, 7) focus on success, perseverance, the tendency to risk and performance [3].

Also be aware of the spiritual needs of specialists that arise in the process of their socialization, perception of social norms. Spirituality of personality provides social and psychological side of his health and consists of cultural and aesthetic needs.

Famous Russian researcher D. Ivanov besides the general intellectual skills (ability to analyze, ability to make comparisons, ability to generalize and classify) believes that professionals need research skills (ability to shape the purpose and object of study, the ability to describe phenomena and form questions), communication skills (ability to come into contact easily, ability to speak to an audience, ability to work with information, ability to write texts), reflexive (ability to analyze your own actions and deeds, ability to analyze someone else's work, ability to identify ways of activity), etc. [87; p. 88-89].

So, taking into account all the knowledge, skills and personal qualities necessary for support of the high professional level of a specialist, we offer the following components of competitiveness:

Personal:

axiological component determines value orientations and motivation of personality, his activities and actions. It contains internal impulsive force of personality;

cognitive component accommodates the cognitive abilities of the individual, which form competence of the theoretical and practical orientation on the perception and processing of external information, and it forms knowledge of the major categories, principles and laws of activity, knowledge about the nature of the profession, knowledge and ability to self-knowledge and self-assessment of specialists's own professional potential;

pracsiological component reflects behavioral competences of the individual that ensure his effective activity.

Professional and active:

professional component includes professional competencies that define professionalism of activity, which, in turn, not only reflects in the efficiency and quality of results, but also reflects the professional and social status of the specialist, striving for personal and professional achievements. The structure and contents of professional component are determined by the specifics of the profession and are based on the interest to the profession, professionalism, professional autonomy, and professional mobility. It reflects the position of the subject of work and contains the result of competencies realization and other characteristics of the personal components.

Active component is a component of human activity that is directed to the subject of labor, social environment and himself.

Adaptive component as an element of expert's competitiveness is determined by the processes of restructuring of activity and behavior of the personality in response to the new demands of the environment. These are continuous processes of mastering the professional and personal qualities to increase competitiveness in the environment that is constantly changing. The result of these processes is the formation of identity and role behavior, adequate relationships with others, acceptance by the person of his social role, as well as the coordination

of self-esteem and aspirations of the personality with his capabilities and the reality of the social environment.

Therefore, competitiveness of a specialist is determined by the degree of satisfaction of needs of the workforce consumer. The competitiveness is in professional activity. It is projected on all aspects of human life and it is multilevel personality formation that integrates the individual characteristics with indicators of quality of manpower. Personal and professional active components form functional structure of a specialist. These components provide its most important feature - competitiveness in the process of its dynamic development and interaction.

Theoretical and practical significance of the study lies in the possibility of using the results obtained in the process of designing and constructing of pedagogical processes of formation of specialist's competitiveness.

1. REFERENCES

- National Doctrine of Education Development, approved by the President of Ukraine on April 17, 2002 № 347/2002. - [Electronic resource] - Access mode: http://www.mon.gov.ua/.
- Ansoff I. The strategic management [text] / I. Ansoff, ed. L. I. Evnenko; trans. from English. - M.: Economy, 1989. - 519 p.

Boginya D.P. Conceptual approaches to determination of the competitiveness of the labor force in the labor market [text] / D.P. Boginya / / Ukraine: Aspects of labor. - 1999. - № 6. - P. 38.

- Variy M. J. General Psychology: Tutorial [Text] / M. J. Variy. - 2 edition., corrected. and added. - K.: "Center of educational literature", 2007. - 968 p.
- Zlobina O. Social crisis and life strategies of individual [text] / O.G. Zlobina, V.A. Tikhonovich. - Kyiv: Stilos, 2001. - 238 p.
- Kurevina I.O. Competitiveness of the human capital of Ukraine under international labor migration [text]: abstract to dissertation of candidate of economic sciences: 08.00.02 / I.O. Kurevina National Academy of Sciences of Ukraine. Institute of world economy and international relations. - Kyiv, 2008. - 20 p.
- Maslow Self-actualization [text] / A. Maslow / / Psychology of personality. Texts. - M., 1982.
- Nichkalo N.G. Professional Education and Training: Issues of relationship with the labor market [text] / N.G. Nichkalo / / Formation of wide qualifications the workers. The contribution of VET to the development of labor potential of the XXI century: Collection of materials prepared in the framework of the Ukrainian-German project "Support of the reform of vocational education in Ukraine" / J. Weiss, N. Nichkalo, A. Simak and others. - Nizhyn: "Aspect-Polygraph", 2007. - P. 134-138.
- Fil O.A. Formation of psychological readiness of educational organizations personnel to work in a competitive team [text]: abstract to dissertation of candidate of psychological sciences: 19.00.10 / O.A. Fil, G.S. Kostiuk Institute of Psychology of National academy of pedagogical sciences of Ukraine. - Kyiv, 2006. - 22 p.

RESEARCH SKILLS OF FUTURE MANAGERS AND METHODS OF THEIR DIAGNOSIS

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Abstract: *In the article the author determines the role and importance of research skills to professional activity of future managers. The essence and classification of the concept "research skills" of future managers are analyzed and clarified. The author considers the level diagnosing methods of the future managers' research skills.*

Keywords: research skills, future managers, search activity, exploratory behavior, divergent thinking

JEL (Journal of Economic Literature) Classification:
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In the conditions of establishment and development of the social market economy, a high degree of uncertainty and risk today managers have to deal with many complex, novel challenges and tasks. In such circumstances, the training of professional managers has to become more dynamic, flexible and distanced from the templates. So the most popular are professionals who are not only good at their profession, but who also are able to adapt quickly and learn new skills and knowledge. One step in this direction, in our view, is to develop the research skills of future managers.

Every manager takes in his work his own personality traits. But there is always something in common, which is defined by features of activity and the environment in which it operates. Modern conditions of management are the need for research. This requirement is implemented in a variety of forms - the organization, methodology, etc. The manager must think actively and independently, solve various managerial tasks creatively and seek solutions to new situations. In this case, he will be able to organize the operation of the managed object at a high level that meets modern requirements. The peculiarity of such managers is active use of the research approach in solving all problems and developing management solutions. This manager has problematic vision of the world, the ability to recognize problems where others can't. He knows how to pose problems proactively, i.e. when they are still in their infancy. He systematically perceives reality, the processes of functioning and developing of the managed object. He is able to make the correct and successful conclusion with a deficit of information.

It is fundamentally important that not only the possibility but also the right in certain limits to change and update the content, methods and forms of governance, to conduct necessary for this research work is enshrined in legislation and legal documents - the National Doctrine of Education Development of Ukraine (2001), the Law of Ukraine "On Higher Education" (2002), the Law of Ukraine "On the innovation activity" (2002), State national program "Education" (Ukraine XXI Century) (1993) and others. According to these documents, the main task of reforming higher education is the education of the creative personality, able to carry out productive professional career at high academic and professional levels.

At the same time, analysis of vocational education programs indicates a lack of focused work on forming research skills in the vast majority of future leaders. Some attempts of research skills formation have no sufficient scientific justification and required organizational methods.

Those attempts are sporadic and eclectic in content. This leads to the fact that the vast majority of managers can not meet the demands of society to manage and their own needs for the management of innovation processes and self-resolving ongoing management tasks.

All these requirements make the problem of our study really urgent.

Terminological research in scientific sources showed a variety of opinions regarding thesaurus which is used in the study of research activity of students of higher educational establishments. Content analysis allowed us to identify the main definitions-epithets of such activity: search, search and creative, educative and search, scientific and search, educational and research, cognitive.

Let's consider the most important approaches for our study. N. Goloviznina, V. Uspenskiy, I. Zimnyaya, E. Shashenkova and others are considering research skills as an outcome and a measure of research activity.

In definition of V. Andreev that is the ability to use certain techniques of the scientific method of cognition in solving educational problems during the research tasks[1].

According to N. Goloviznina, research skills are structurally documented in the implementation of research, and they are the result of the one of the main criteria. "Research skills are expected learning outcomes in research activity; the integration of specific, conscious, interdependent, perfectly mastered actions that provide independent creation of research product of students" [2].

Authors of different approach such as P. Romanov, H. Muliukov, S. Arsenova, N. Sychkov, M. Povolyaeva and others are considering research skills as the ability to act, that is necessary to perform research activity. P. Romanov gives the following definition of research skills "research skills are the student's ability to carry out actions effectively, that are appropriate at each level of the education system in accordance with the logic of scientific research on the basis of existing knowledge and skills" [3].

According to E. Shashenkova research skills are a conscious possession of a set of operations that are the ways of realization of mental exercises and practical actions (including creative research actions) that make up research activity, the success of the formation and implementation of which depends on previously acquired skills [4].

Recognizing the need to combine these approaches we will understand research skills as a complex system of practical and intellectual actions, that allows the research activity or its individual stages and that is formed by research activity in the presence of appropriate knowledge and skills.

In the scientific literature there is quite a number of attempts to classify research skills. Thus, we analyzed the skills classification built on functions of activity (Z. Esareva, N. Kuzmina, V. Nikolaev, L. Spirin, A. Shcherbakov and others) on logic (phasing) of the process of activity, including research activity (I. Isaev, I. Berdnikov, M. Vladyka, N. Yakovleva and others). None of the identified and analyzed classifications is currently recognized. Having considered these various classifications of research skills, we can conclude that in psychological and pedagogical literature there is no common thought on the composition of research skills. And thus, the proposed classifications are not sufficiently detailed. However, for the successful formation of research studies it's very important to determine their structural composition. The most logical classification of skills for us is the one proposed by V.A. Andreev. Scientist identifies four groups of skills: operational, technical, communication and organizational [1, p.107]. This classification determines the most complete range of research skills. But we found it necessary to supplement it with an independent group of diagnostic and intellectual skills. Therefore, our author's classification includes six groups of research skills: diagnostic, intellectual, operational, informational, constructive and designing, communication. The basis of classification that we present includes necessary for future manager research actions and operations. In our view,

represented classification will organize a variety of skills for their intended purpose, depending on the stages of research, which is important in the diagnosis of skills and their gradual formation.

For the successful formation of research skills, as well as for training and research activities the subject requires specific personal formation, which outlines a set of relatively independent components such as search activity, divergent and convergent thinking. This idea has been taken by us as a basis for developing a mechanism of diagnostics of research skills.

Search activity is the primary source and the main engine of the research command. It characterizes the motivational component of research abilities. The presence of search activity is indicated by high motivation, interest and emotional involvement.

The level of search activity is monitored with the help of observational maps that were made by us based on the methodology proposed by A.I. Savenkov for primary school children [5]. Diagnosis of each testee uses three experts who are university professors, teaching those subjects, which have a greater number of hours in the classroom.

According to the results of monitoring experts peer-review a three-point scale (1 point - "often", 2 points - "sometimes", 3 points - "rarely or never"). The activity of students is evaluated on five characteristics that, from our point of view, show the most relevant level of development of the search activity of students:

- often asks questions about anything specific, or about all at once;
- considers handouts used in class with interest;
- likes to experiment;
- from the tasks offered in class, prefers those that are associated with the observations;
- interested in additional features and application areas studied laws, rules, etc.

For the distribution of the results of formation in these levels (low, medium, high) we used the technique of three-level diagnostics proposed by L.M. Mitina and E.S. Askomovets [6]. According to this method, the upper limit of low level is coefficient 0.45, and the upper limit of the average level is 0.75. To determine the upper limit of low level and upper limit of the average level such formula were used:

$$U_1 = \Sigma_{min} + (\Sigma_{max} - \Sigma_{min}) \cdot 0{,}45;$$

$$U_2 = \Sigma_{min} + (\Sigma_{max} - \Sigma_{min}) \cdot 0{,}75;$$

Where:

U1 and U2 are quantitative indexes of upper limit of low level and upper limit of the average level;

Σ_{min} and Σ_{max} are minimum and maximum amount of points on the unit.

Ability and propensity for divergent thinking is a quality necessary in situations of exploratory behavior. Divergent productivity is required at the stage of identifying problems and for finding the possible solutions (hypotheses).

Level of divergent thinking is determined by E.P. Torrance test of creativity "Options for the use of objects." The testee must within five minutes list as many ways of usage of the given subject. The offered subject should be well known to students. It's usage cases can be both standard and unusual. According to the results of the task three measures are checked: fluency, flexibility and originality of thinking. Fluency is the total number of responses. Flexibility is the number of response categories. Originality is the number of unusual and original responses.

To determine the level of formation of divergent thinking we use the same three-level diagnostic technique proposed by L.M. Mitina and E.S. Askomovets.

Convergent thinking is crucial in the analysis phase and assessment of the situation, at the stage of judgment and reasoning. It is closely associated with the gift of problem solution based on logical algorithms through the ability to analyze and synthesize. It is an important condition for the successful development and improvement of the object of research, evaluation of the acquired information and reflection.

Levels of converged productivity are estimated using classical tests of intelligence - Raven's matrices and Eysenck test.

Raven matrix or “Raven Progressive Matrices” is 20 sets of 8 graphics (images), similar to each other. There both the similarities and differences between the figures are subordinated to the laws of logic. Testee has to identify patterns in the change of shape and pick up the ninth figure of the proposed set. The author of the method proposed his own scale graduation that includes the following five levels of intelligence: especially high intelligence, above average intelligence, average intelligence, below average intelligence, a defect of the intellect.

The methodology, based on the diagnosis of convergent thinking with Eysenck tests proposes the classification based on the position of points on the graph.

Study of research skills can be successfully performed during the observations. A.I. Savenkov believes that by observing the behavior of students in situations requiring exploratory behavior, you need to focus on the following criteria: the ability to see the problems, the ability to ask questions, the ability to make hypotheses, the ability to give a definition of the concepts, the ability to classify, the ability to observe, skills of providing experiments, the ability to draw conclusions, the ability to structure the material, the ability to explain, demonstrate and defend your ideas [7].

According to these criteria, it is possible to assess the full range of skills required in situations of exploratory behavior, and therefore, they should be the formation and development of research skills of future managers.

For the examination of the level of formation of research skills E.Yu. Samokhina [8] designed maps of observation "expert assessment of research skills", consisting of 10 statements (each statement corresponds to two points).

1. Very curious in many different areas. Is able to perceive and describe the object from different points of view.

2. Asking the question, formulates his thoughts and use question words correctly. Knows how to make a chain of several questions to identify the basic properties of the object.

3. Raises a number of different ideas or solutions to the problem. Offers unusual, innovative, original ideas to solve the problem or to use the objects, rules, laws, programs, etc.

4. Is able to describe the object, selecting its properties. Knows how to recognize the object by given definition (description).

5. Is able to include the object to a certain class. Is able to classify a group of objects on different grounds.

6. Quick to respond to errors and inaccuracies that the teacher or other students do, and corrects them. During the observation notes not only basic, but secondary objects and phenomena.

7. Involved in organizing and conducting the experiments with interest. Tries to verify his assumptions (hypotheses) by experiment.

8. Is able to draw conclusions on the results of observations or experiments. Knows how to make an annotation (brief retelling, abstract) educational and scientific text.

9. Is able to present the studied material in the form of charts, tables, lists. Is able to recover the text with proposed scheme.

10. Involved in the debates and discussions; able to convince the interlocutor in his rightness. Expresses his thoughts well, has a large vocabulary, refers to the competent authority

(in his view) sources.

For each statement there is a rating on a scale that includes 1 point - "never", 2 points - "rarely", 3 points - "sometimes", 4 points - "often", 5 points - "always." Diagnosis of each testee is made by three experts. According to its results the total number of points for each student, and the level of formation of research skills are determined.

Comparative analysis of the results is carried out by using statistical techniques: U-Mann-Whitney test (comparison of performance of control and experimental groups at any stage of the experiment), and T-Wilcoxon test (comparison of experimental groups at the beginning and at the end of the experiment).

Final results of the diagnosis are represented by two levels: information for students (interpretation of the results of the features of their thinking, attention, memory, etc., made in a positive way), and information for the teacher (the information in tables and charts of the day for further analysis).

These techniques make it possible to diagnose and characterize the level of formation of research skills at the initial and the final stage. Diagnostic results allow us to determine the main directions for the formation of research skills of future managers, and adjust it to the individual characteristics of specific students.

1. REFERENCES

- Andreev V.I. Heuristic programming in educational and research activity: methodological manual / V.I. Andreev. – M.: High School, 1981. – 240 p.
- Goloviznina N.L. Research skills as a tool of development for amateur performances of high schoolers: abstract to dissertation for the Candidate of pedagogical sciences / N.L. Goloviznina. – Kirov, 2005. – 21 p.
- Romanov P.Yu. Formation of research skills of students in the system of continuing education: abstract to dissertation for the Doctor of pedagogical sciences / P.Yu. Romanov. – Magnitogorsk, 2003. – 20 p.
- Research activities: a dictionary / [comp. by E.A. Shashenkova]. – M.: Perspectiva, 2010. – 88 p.
- Savenkov A.I. Way into the unknown: The development of research skills of pupils: methodological manual for school psychologists / A.I. Savenkov. – M.: Genesis, 2005. – 203 p.
- [Mitina L.M., Askomovets E.S. Emotional flexibility of a teacher. Psychological content, diagnosis, correction / L.M. Mitina, E.S. Askomovets. – Moscow, 2001.
- A.I. Savenkov Psychological basis of the research approach to learning: tutorial / A.I. Savenkov. – M., 2006.
- E.Y. Samokhina Diagnostics of research skills of college students /E.Y. Samokhina / / Secondary vocational education. – № 2. – 2012. – P. 56 – 58
- A.N. Poddiakov Exploratory behavior: learning strategies, help, counteract, conflict / A.N. Poddiakov. – M., 2000.
- Tunick E. Diagnosis of creative thinking: creative tests / E. Tunick – M., 2006.

SELECTED VIEWPOINTS IN FINANCING ROMANIAN GOVERNMENT DEFICIT USING TREASURY BONDS SOLD TO SMALL INVESTORS

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Abstract: *The Government budget balance, also commonly referred to as general government balance public budget balance, or public fiscal balance, is the overall result of a country's general government budget over the course of an accounting period, usually one year. It includes all government levels (from national to local) and public social security funds. The budget balance is the difference between government revenues (e.g., tax) and spending. A positive balance is called a government budget surplus, and a negative balance is called a government budget deficit. The government budget balance is used to assess the fiscal health of a country. It is further differentiated by closely related terms such as primary balance and structural balance (also known as cyclically-adjusted balance) of the general government. The primary budget balance equals the government budget balance before interest payments. The structural budget balances attempts to adjust for the impacts of the real GDP changes in the national economy. Keynesian economics advocates a government budget deficit during recession or downturn as long as it is limited enough to render the structural government budget balance positive.*

Keywords: treasury bonds, financing the deficit, borrowing

JEL (Journal of Economic Literature) Classification: E42

1. INTRODUCTION

The Government budget balance, also commonly referred to as general government balance, public budget balance, or public fiscal balance, is the overall result of a country's general government budget over the course of an accounting period, usually one year. It includes all government levels (from national to local) and public social security funds. The budget balance is the difference between government revenues (e.g., tax) and spending. A positive balance is called a government budget surplus, and a negative balance is called a government budget deficit.

The government budget balance is used to assess the fiscal health of a country. It is further differentiated by closely related terms such as primary balance and structural balance (also known as cyclically-adjusted balance) of the general government. The primary budget balance equals the government budget balance before interest payments. The structural budget balances attempts to adjust for the impacts of the real GDP changes in the national economy. Keynesian economics advocates a government budget deficit during recession or downturn as long as it is limited enough to render the structural government budget balance positive.

The money market is a sub-sector of the bond market. It consists of very short-term debt securities that usually are highly marketable. Many of these securities trade in large denominations, and so are out of the reach of individual investors. Money market funds are easily accessible to small investors. These mutual funds pool the resources of many investors and purchase a wide variety of money market securities on their behalf: overnight repurchase agreements, term repurchase agreements, time deposits, short term treasury securities,

commercial papers, money market deposits accounts, all representing the various instruments of the money market that I will describe in detail.

2. WHAT HAPPENS IN OTHER EUROPEAN COUNTRIES

Even after four years of crisis, and still begging for the banks funds, Romanian Ministry of Finance and the Treasury still not recognize the solution used in Germany, Sweden, Italy, USA, and even in Czech Republic, Poland and Hungary as strategy to insure funds from own small investors, as a stable and easy to mobilize resource in strain moments, eventually conditioned by the trust in the government.

What had worked in all these counties could work in Romania too, and while the government struggle to find some arguments in reinforcement of this great solution which was cast aside in 2000. Non official explications lie in competition with banking deposits. And while Romania had always protected banks while sustained by IMF, the solution is not very easy. Below is a short analysis of other European countries in the matter:

⇒ ***Poland***

- Ministry of Finance sells treasury bonds especially to retail investors (foreign and resident) for liquidity needs of the budget.
- The bonds could be achieved through the biggest bank PKO Bank Polski, state owned but listed on Poland Capital Market.
- Private person could choose between maturities, from 2 to 10 years, with fixed, variable or indexed interest.
- Nominal value of a retail bond is 100 PLN (about 100 RON) and the sale is open for one month. Small value is in favor of small investors, as almost everyone could afford to buy.
- Retail bonds are not listed on Capital Market, but it could be sold in advance to Ministry of Finance.

⇒ ***Czech Republic***

- It started to sell state bonds to people in 2011.
- The bonds are called "*economy state bonds*" and in 2012 represented 5, 1% of total bonds issued on medium and long term in CZC and 3, 4% of public debt.
- In 2013 bond sales could be at 1, 5 mld. EURO and being so a strategy for public debt management.
- State sells to people bonds with diverse maturities from 1,5, 3,5 to 7 years, with discount and a coupon with fixed or indexed interest.
- The smallest investment is 1000 CZC (about 5800 RON) and bonds are distributed through banking system without commission.
- Bonds could be bought in advance without penalties at a price proposed by Ministry of Finance.
- Yields are taxed with 15%.

⇒ ***Hungary***

- Hungarians detained at the end of the 2012 year 7,5% of public debt representing 3,1 mld. EURO.
- Government try to increase people's owning to 10% of debt, this strategy being hardly criticized by financial analysts because of the possible migration of deposits tendency.
- Minimal value of one bond is 10.000 HUF (about 148 RON).

- Hungarian Ministry of Finance issued last year treasury bonds in EURO for retail investors offering an interest with 2,5% over medium inflation in EURO zone (5,1% yearly interest). Minimal value of one bond is 100 EURO.
- Distribution is insured by banks (agreed by Ministry of Finance) and by Treasury and even through postal system.

⇒ ***Croatia***

- Could introduce on the market sale of Treasury bond for the Croatians in this year, just to gain some protection from market conditions.

⇒ ***Slovakia***

- Currently is analyzing the means to distribute to small investors state and treasury issued bonds by postal offices or banking system.

⇒ ***Romania***

- State issued bonds could be bought by persons through banking system or from capital market (BVB).
- Nominal value of one bond is 10.000 RON (high value for a small investor).
- In October 2012 resident Romanians owned 2,7 mld. RON in treasury bonds, meaning 3,6% from total issued by state.
- They also owned EURO bonds in value of 256 mil. EURO (5,8% from total state bonds issued in EURO).
- For state bond investment, in Romania taxation is null, and risk is the smallest on the market.

3. A SHORT OVERVIEW OF ROMANIAN TREASURY BONDS

In other countries, treasury bills are the most marketable of all money market instruments for public investors. The bills represent the simplest form of borrowing: the government (the Finance Ministry) raises money by selling bills to the investors. Investors buy the bills at a discount from the stated maturity value. At the bill's maturity, the holder receives from the issuer a payment equal to the face value of the bill. The difference between the purchase price and ultimate maturity value constitutes the investor's earnings. These bills are highly liquid: that is, they are easily converted to cash and sold at low transaction cost and with not much price risk.

The income earned on these bills is generally exempt from all taxes, another characteristic distinguishing them from other money market instruments.

In Romania, the investment in treasury bond are reserved for private banking clients, and they detained in 2012 only 2,7 mld. ROL (628 million EURO) meaning as low as 3,6% of overall state treasury bonds.

Until now Ministry of Finance keeps state issued bond only for personal investors with big money, afraid to upset banks in seeing deposit withdrawals migrating to other alternative investment means, with small risk and tax free yields.

Public debt administrators forget last history moments when bank had to be forced by National Romanian Bank (as regulator in banking system) to buy state issued bonds in RON or EUR at reasonable prices. Their pathetic arguments lie in the difficulties and cost of distributing treasury bonds.

Their colleagues in Poland founded an easy solution by selling bond through PKO Bank, the biggest state owned bank, Hungary and Slovakia sell through postal offices, but Romanian government do not consider CEC Bank (last state owned bank in Romania) as a valid alternative. Why not?

Treasury Management spoke about increasing investment basis, but the only solution offered is non residents and foreign investors. Another mean could be the reduced value of a

bond (actually 10.000 RON) which will increase the market, but for the small amount of money saved and existed on the money market the state is not tough enough to fight with the banks.

Still, selling treasury bonds for population (as small investors) even called economy bonds is considered in countries as Czech Republic, Poland or Hungary a strong financial success, the retail offerings provide many maturities and insure protection against inflation by offering indexed interest.

To apply in Romania such measure, first it must be analyzed the administration costs and the efficiency of the project. Any bank will negate the measure, while it will be considerable clear that the small investors (with very little money) could and surly would transfer their investment in banking deposits to treasury bonds, tax and risk free. Still, in Romania exists a guaranty deposit fund which ensures deposits up to 100.000 EUR. And even a small risk for Treasury bond is a risk for small investors. So what will they choose? Big private investors already chose state bond, while tax free and possibility to buy them through private banking system and capital market (which is a possibility but the transactions are small).

Invoking the weak financial culture of the public is a low blow. Romanian state and government did not remark itself by any contribution of increasing the financial culture of its own citizens, and eventually it will be a start. Another possibility could be an increase interest for the bonds, bigger as for banking deposits, but it could be a protection in front of vulnerability and instability of selling to foreign investors as less volatile financing. This will be an understood price to pay for the stability of the debt. Last year foreign investors had 11% of treasury bonds, but after the political crisis of last fall this percent was downfall to 5%, an instant pressure for the local currency.

In local region countries which sell treasury bonds did not organize a secondary capital market for these instruments, while investors hold the tendency to keep the investment for as long as their maturity. Still, some national treasuries offer to buy these bonds in advance.

And Finance Ministries encourage and stimulate the interest for these instruments as a possibility to manage public debt, at lowest cost in the market and the solidarity over national budget in time of need.

4. CONCLUSIONS

- The money market is a sub-sector of the bond market. It consists of very short-term debt securities that usually are highly marketable. Many of these securities trade in large denominations, and so are out of the reach of individual investors. Money market funds are easily accessible to small investors. These mutual funds pool the resources of many investors and purchase a wide variety of money market securities on their behalf: overnight repurchase agreements, term repurchase agreements, time deposits, short term treasury securities, commercial papers, money market deposits accounts, all representing the various instruments of the money market that I will describe in detail.
- In Romania, treasury bills are the most marketable of all money market instruments. The bills represent the simplest form of borrowing: the government (the Finance Ministry) raises money by selling bills to the public. Investors buy the bills at a discount from the stated maturity value. At the bill's maturity, the holder receives from the issuer a payment equal to the face value of the bill. The difference between the purchase price and ultimate maturity value constitutes the investor's earnings. These bills are highly liquid: that is, they are easily converted to cash and sold at low transaction cost and with not much price risk. The income earned on these bills is exempt from all taxes, another characteristic distinguishing them from other money market instruments.
- Not only Romanian government do not consider its own population as a possible investor, with a very important role in financing the deficit, but also put limits in fixing a

high nominal value for a Treasury bond at 10.000 RON (2300 EURO), which is, for a small investor very high and expensive.

- On the other hand, direct investment in Treasury bond is tax free, while bank deposits and investment funds are taxable with 16%. So purchasing Treasury bonds are reserved for only one small group of personal investors: people with money, clients of private banking system, which could afford to pay such amount of money for one bond. And still tax free. As a saying say "*money will always stuck to money*".
- If the government will issue treasury bonds for small investors (at a lower price), that will be a measure to citizens to penalize the state: when the state spend more (and wastefulness), increase the spending and climb inflation - which erode the rate of return and interest – people will sell the bonds and consequently the prices will decrease. Relation between state and own citizens will be more active and direct as today, when people penalize politicians only from four in for years, through elections.
- Invoking the weak financial culture of the public is a low blow. Romanian state and government did not remark itself by any contribution of increasing the financial culture of its own citizens, and eventually it will be a start. Another possibility could be an increase interest for the bonds, bigger as for banking deposits, but it could be a protection in front of vulnerability and instability of selling to foreign investors as less volatile financing. This will be an understood price to pay for the stability of the debt. Last year foreign investors had 11% of treasury bonds, but after the political crisis of last fall this percent was downfall to 5%, an instant pressure for the local currency.
- As we saw lately (the decreasing of the RON quotation in middle February) Romania enjoys the returning of foreign capital (as investors for treasury bonds issued in February 2013) and the administration want not to make a move in promoting internal savings and thus reduce high vulnerability and fluctuation in financing.
- Banking system will be always warded and favored because it is the base of financial system. But to insure protection over theirs own small investors, and for a small amount of money, only to guarantee it for the rich and big investors is a cynic measure for a social state (or presented as such).
- Finance Ministries should encourage and stimulate the interest for these financial instruments as a possibility to manage public debt, at lowest cost in the market and the solidarity over national budget in time of need.

5. REFERENCES

- Basno, C. Dardac, N. s.a. (1997), *Monedă, credit, bănci,* Ed. Didactică şi Pedagogică, Bucureşti;
- Baye M., Jansen D. (1995) *Money, banking and financial markets: An economic approach*, Houghton Mifflin Comp. Boston;
- Brealey, R. Myers, S., (2003) *Financing and Risk Management,* McGraw&Hill, New York;
- Bruner, R. (1990) *Case Studies in Finance,* Irwin Inc. Boston;
- Burda M., Wyplosz C. (1995), *European Macroeconomics*, 2nd ed., Oxford University Press;
- Dardac, N., Barbu, T. (2005), *Monedă, bănci şi politici monetare,* Ed. Didactică şi Pedagogică, Bucureşti;
- Dragotă, V. şi colectiv, (2005), *Evaluarea acţiunilor pe piaţa de capital din România* Ed. ASE, Bucureşti;

- Dufloux, C. (2002), *Pieţe financiare,* Ed. Economică, Bucureşti, 2002;
- Finkler, S.A. (2005), *Financial Management for Public, Health And Not-For-Profit Organizations*, 2nd Ed., Pearson Education, Inc.;
- Rosen, H. (2005), *Public Finance*, 7th Ed., McGraw-Hill Irwin;
- Niculescu, M. (1997) *Diagnostic global strategic,* Ed. Economică, Bucureşti;
- Peterson, P. Fabozzi, F. (2002), *Capital Budgeting – Theory and practice,* John Wiley&Sons, SUA;
- Petria, N. ()2004, *Pieţe financiare româneşti,* Ed. Universităţii Lucian Blaga Sibiu;
- Bodie Z., Kane A. (1989), *Investments*, Marcus Alan, Ed. Irwin Inc., Boston;
- http://www.imf.org/external/pubs/ft/weo/2007/01/data/weorept.aspx?sy

THE STIMULATION OF POSITIVE MOTIVATION OF FUTURE ENGINEERS AND MATHEMATICIANS TO MASTERING PROFESSIONAL COMPETENCE OF MATHEMATICAL MODELING

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Abstract: *In clause the role of the stimulation of positive motivation of future engineers and mathematicians to mastering professional competence of mathematical modeling is considered.*

Keywords: pedagogical condition, stimulation, positive motivation, future engineer, professional competence of mathematical modeling

JEL (Journal of Economic Literature) Classification:
http://www.aeaweb.org/journal/jel_class_system.html

As noted in the pedagogical dictionary [1], pedagogical condition is a certain circumstance, a set of preconditions, because of which the teacher reaches a certain operating goals, using teaching methods and tools. According to G. Kostyshyna [2], the implementation of competence approach in teaching and learning process of higher education based on respect for certain pedagogical conditions for:

• obtain knowledge and skills;
• unity of educational, developmental, educational functions;
• Development of value-oriented and motivation of the individual;
• implementation of differentiation and individualization of learning, and the use of pedagogical and psychological incentives and more.

According to the author, pedagogical conditions necessary to apply in unity and cooperation in teaching and educational activities [2, p.35].

Pedagogical conditions of professional competence of mathematical modeling in the future engineer and mathematics – a set of circumstances that lead to high-quality, effective training and determine its outcome. There are many conditions - social, economic, logistical, political, psychological and educational affecting education quality results. But high school can change and affect only psycho-pedagogical conditions.

The professional competence of mathematical modeling is shaping the future engineers, mathematicians need to consider the features of polytechnic education. V. Sydorenko, studying the works of V. Lyednova notes that polytechnic education is based on the assimilation patterns of major construction and operation of technical systems in the study of basic engineering technologies and polytechnics in the formation and skills [3, p.5].

Polytechnic education has three levels: professional and executive, manufacturing, communicative, social and production.

All of the above have a common didactic basis, which should include - implementing active learning (business games, training, game design), complex cognitive tasks practical, productive work, realistic manner professional future specialist) that can be allocated to individual pedagogical conditions of professional competence of mathematical modeling the future engineers mathematicians.

The learning process in the polytechnic university has played not only on substantive operations as mental processes, conditions, intellectual and emotional aspects of future

employment specialist, which are adequate mental state of the individual involved in the labor process [3].

In forming merit engineer mathematics to educational conditions should include all the circumstances affecting the organization, goal-setting, managing educational process and the forms, methods, tools, control over educational activity, independent study students and others. According to educational research of I. Abramova [4] L. Dydkova [5], pedagogical conditions associated with the educational process, greatest impact on improving professional skills of future engineers.

Main part. One of the pedagogical conditions that promote the formation of professional competence of mathematical modeling in the future engineer-mathematician is to encourage positive motivation of students to master the professional competence of mathematical modeling.

The catalytic function of training is best placed to help implement other educational functions when using any methods. But the stimulus is a real driving force when it becomes a motif, internal student motivation to action [6, p.135].

Stimulating future specialist to master knowledge and skills is an important function of the teacher. But the impact of this incentive is always dependent not only on learning, but on the individual student. The same stimulus differently affects the motivation of future specialist, depending on the ratio of students to this stimulus preparedness perception, emotional state, volitional qualities, personality, health and other individual factors of personality.

Motive is a force that encourages future engineers, mathematicians to effective professional activity in general, but also to develop their professional competence of mathematical modeling particular.

We agree with the idea Y. Babanskiy [7], who believes that the development of a specialist of motives can orient it to:

• acquisition of new vocational important knowledge, skills and abilities;

• master the means of obtaining and seeking new knowledge important to the profession, developing a strong interest and interest in learning;

• self-education, self-improvement, increasing the desire to engage in professional activities;

• need to gain credibility in the group, developing the desire to interact presence and sense of responsibility.

Motivation is the driving force of any activity, including scientific and professional with cognitive and mathematical modeling.

For the successful implementation of future training engineers and mathematicians developing abilities, knowledge and skills required for the construction and study of mathematical models play an important role cognitive motive - especially general social and professional. They cause a student's sense of responsibility and duty to the other subjects of the educational process, develop activity, interest in achieving high performance, contribute to the implementation of creative ideas and opportunities for students in practical and professional activities.

A similar opinion is shared by T. Martsynkivska [6], who believes that learning motivation can be divided into two broad categories. The first group, according to scientists, is cognitive reasons that relate to the content of training activities and the process of its implementation. These include: cognitive interests, the need for cognitive activity and learning new knowledge, skills, abilities.

The second group is characterized by social motives are associated with human relationship with the environment - the needs of the individual in dealing with the environment, approving actions, desires to occupy a place in society and in public relations. Therefore, to stimulate and motivate learning activities students include methods of forming cognitive interests

and techniques aimed at creating a sense of duty and responsibility.

It should be noted that the educational and professional activities are based on the relevant group of motives that are in hierarchical cooperation and promote development of professional competence in mathematical modeling. This is due to the fact that scientific and educational motivates students to obtain certain knowledge and skills, due to interest in the learning process, the content of the subjects taught. On the other hand, professional motives related to future specialist interest in obtaining certain knowledge and skills for obtaining a profession, successful execution of professional activities.

The system of motives and interests, needs and goals motivates students to put the problem chosen means and methods to solve it successfully to solve it. Given the arguments of scientists L. Vygotskiy, K. Platonov, O Leontyev, S. Rubinstein, we note that the motivational sphere of professional activity were also associated with values, attitudes, beliefs, professionally important qualities of personality (activity, independence, creativity, reflective skills), changes which affect the formation pattern of future engineers, mathematicians to the mathematical modeling.

Therefore, the formation of professional competence in mathematical modeling involves the development of motives, vocational and educational interests, personality traits that improve the professional orientation, professional development and self-development of future engineers and mathematics. This process requires a future specialist in mathematical modeling of productive activity, a permanent correction of their actions; necessitates responsibility self-awareness, self-esteem.

Analysis of psychological and educational literature (J. Atkinson, S. Zanyuk, D. McClelland, O. Romanovskiy, N. Fiter), indicates that that professional learning interest arises when a person feels confident, capable of anything that she good at it, feels it adequately perceived by others, that is motivation to achieve.

The method of achievement motivation belongs to the "method of success." Its essence is that the practical problems of mathematical modeling are selected according to individual abilities of students gradually increasing complexity, allowing each of future professionals succeed in solving the problem. In the process of solving these problems, a person begins to feel confident in their own abilities and capabilities, there is interest in the subject, is the development of practical skills component of professional competence in mathematical modeling.

Furthermore, we consider appropriate to use the context of training for effective formation direction of future engineers, mathematicians for professional work in the field of mathematical modeling. This type of training provides gradual transformation of student learning activities in a professional career specialist. This transformation is achieved by:

• organization of substantive impact and social context of future professional activity on the formation of professional competence in mathematical modeling and results of student learning activities;

• summarizing the theoretical and practical experience in the use of active learning methods (gaming techniques, training) aimed at achieving proper and adequate self-respect of the process and results of the cognitive activity of introspection professional activities in the field of mathematical modeling of future professionals;

• a commitment to future professional profession in the field of mathematical modeling settings.

Thus, for the successful organization of the educational process and the formation of this competence of engineers, mathematicians should pay special attention to the preparation of a future professional activity, which depends on the formation of achievement motivation. The latter is based on the experience of success in performing their professional tasks of

mathematical modeling, compliance goals and the results obtained, as well as self-future engineer and mathematics.

We agree with the reasoning of O. Mezhentseva who believes that self-esteem is a powerful incentive for people in the quest for self-improvement. S. Rubenstein examines self-esteem as a product of the individual in the process of life. It serves a regulator of behavior and activity specialist, affecting the further development of his personal and professional qualities. From self-esteem depends on the criticality of man to himself and his actions, interaction with the environment, attitudes toward success and failures of others.

Self future engineer and mathematics for compliance purposes the obtained results based on professional reflection, which is the basis of self-identity and mechanism of thinking specialist. In our opinion, the formation of professional competence of mathematical modeling appropriate use means "self-concept" to future expert analyzed not only a practical problem, and actually thinking, creating an image of his own "I".

This will allow future engineers and mathematicians to conduct self-examination of his intellectual and professional level in the field of mathematical modeling (intellectual reflection), and personal qualities and characteristics that he finds in the search process of solving engineering tasks (personal reflection). As noted L. Ruvinskiy and A. Solovyova, during self-man always makes a step towards self-development and self-improvement, to professional formation [8].

For this we consider appropriate to implement the educational process and exercise training on self-image of its own future professionals "I". These exercises will organize the game interaction, in which future professionals will meet the challenges of professional orientation on mathematical modeling on a personal level. Understanding the situation, assessment and regulation of action and decision-making for solving the tasks of the results - will help students understand their own abilities, strengths and weaknesses, personal qualities are important for forming of professional competence of mathematical modeling.

This training is one of the psychological methods that implements the necessary psychological conditions for the development of professional and personal identity specialist, aims to increase motivation to professional, develop professionally important qualities of future engineering and mathematics, as well as the skills of mathematical modeling. According to I. Vachkov, training (teaching game) combine learning and gaming activities taking place in a variety of modeling situations.

One of the main tasks of socio-psychological training is to motivate and create a positive attitude towards the profession, self. The result of the training should be to develop the ability of future specialist to apply accumulated knowledge and skills in a particular situation. Given the existing complexity of modern engineering problems, the future engineer-mathematician must have certain skills and teamwork skills, the tasks in the group, which formed a specialist during training.

In addition, the process of goal-setting and each stage of the construction of research of mathematical model process or phenomenon must be discussed with students. There are mental steps, figuring out the views and opinions of students on solving problems. It will facilitate the development of reflexive regulation, professional and educational interest and professional orientation and professionally important qualities necessary for success in the field of mathematical modeling.

1. REFERENCES

- Teaching vocabulary: Dictionary / Acad. ped. Sciences of Ukraine, Institute teacher. Pedagogical Sciences of Ukraine, ed. M. Yarmachenko, Head office. group N. Kopylenko. - Kyiv: Teacher opinion, 2001. - 514 p.

- Kostyshyn G. Implementation of the competency approach in the process of teaching and learning of students of technical universities / / Scientific notes of Ternopil State. ped. Univ them. Volodymyr Hnatiuk. Series: Pedagogy: collection / Ministry of Education and Science of Ukraine, Ternopil National. ped. univ. of V. Hnatiuk. - Ternopil, 2009. - № 1'2009. - p. 32-37.
- Sydorenko V. polytechnic education: contemporary vision / V. Sydorenko, O. Kalihayeva / / Professional training in educational institutions. - 2005. - № 2 (36). - p. 4-7.
- Abramov I. Formation analytical competence of students of engineering faculties agrarian-based tools and techniques available: summary dis. ... candidate. ped. Sciences: 13.00.02 / Abramova I. - Omsk, 2007. - 22 p.
- Dydkova L. Individual approach in shaping the professional competence of economists: Dissertation ... Candidate. ped. sciences: 13.00.04 / L. Dydkova; Institute of Higher Education of Ukraine. - K., 2006. - 219 p. [6]. Grygorovych L. Pedagogy and Psychology: Textbook. manual / L. Grygorovych, T. Martsynkovskaya. - M.: Gardariki, 2003. - 480 p.
- Pedagogy: studies. manual stud.ped.in-ing / Y. Babanskiy, V. Slastenin, N. Sorokin, ed. Y. Babanskiy. - 2nd ed., Ext. and rev. - M.: Education, 1988. - 479 p.
- Puvinskiy L. Psychology own upbringing: studies. manual / L. Puvinskiy, A. Solovyova. - M.: Education, 1982. - 144 p.

MODERN COMMERCIAL ENTERPRISE MANAGEMENT AND ITS ENVIRONMENT

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Abstract: *The specific object of commercial management is the commercial enterprise, considered as a human system whose development is characterized by a constant dynamism of the evolutionary processes that take place within the organization, processes that characterize all those fields of its activity. The system of production and distribution of goods and services of the commercial enterprise is accompanied by extensive space development of economic relations, in a context of fast changes of its environment especially under the impact of developments in science and technology.*

Keywords: commercial management, environment, commercial enterprise, environmental components

JEL Classification: M31

1.INTRODUCTION

GENERAL CONSIDERATIONS REGARDING THE RELATIONSHIP COMMERCIAL ENTERPRISE –ENVIRONMENT

The evolution of modern commercial enterprise is marked currently by amplification interdependencies with the environment in which it operates or performs; the expression of this evolution is the increased openness of commercial enterprise designed as a system, reflected both in terms of inputs and information and that of "outputs"-goods, information and services which are integrated into the national and international environment and which experiences a much more enhanced variety and intensity compared to the previous period.

Environment represents a set of heterogeneous factors (economic, social, political, scientific-technical, legal, geographic, demographic, etc.), which operates nationally and internationally on commercial enterprise, influencing market relations.

The commercial enterprise is an integral part of the environment, it is an economic component. In the present circumstances, the environment is characterized by an accentuated dynamism through a tremendous growth in the frequency of changes.

The link between the nature of the variables, their origin and the effects that occur are outlined in the table 3.1.

Table: The link between the nature of the variables and their effects

Variable nature	**Origin**	**Effects**
Input variable	Environment	On business
Output variable	Enterprise	On environment

Source: D. Patriche (coordonator), *Tratat de Management Comercial*, Ed. Universitară

The Environment can be presented in the form of a stable environment, changing (unstable) and turbulent.

Stable environment appears as an exception, it is only a brief moment and evinces from time to time. It is not a characteristic type of environment and in recent decades has been met very infrequently.

Changing environment presents permanent change and compels the company to have a forward-looking vision. It is a type of the regular environment facing businesses in current stage.

Turbulent environment is defined by significant changes, frequent, sudden, unexpected directions, often transformers, what commercial undertaking the commercial enterprise to great pressures, putting it difficult adjustment problems in general difficult to anticipate.

2. THE ANALYZE OF ENVIRONMENTAL CONDITIONS OF COMMERCIAL ENTERPRISE

Although most researchers in management see the environment as an important element which affects commercial businesses, perspectives differ in terms of the exact nature of the relationships between commercial enterprises and their environment.

Approaches to the relationship between the environment and the commercial enterprise

Many researchers have used a considerable effort in trying to understand how businesses and their environments are linked. Among the most significant approaches to explaining the nature of interference there are two models: the model of natural selection and resource dependence model.

A. **Natural selection model** or the ecological model represents that vision of interference commercial enterprise-environment that focuses on populations or groups of firms, and argues that environmental factors determine those companies with strong and stable features to survive, and the others to disappear.
B. **The Resource dependence model** is a model that emphasizes the resource dependence and the fact that the company is trying to reduce this dependence. The model claims that there is no company that can provide all the resources with their own needs (e.g. General Motors prefers to buy from other countries many of the resources it needs, because in-house production costs would be too high).

The characteristics of commercial enterprise environment

The external environment of the company represents a number of commercial factors or forces that influence the survival of the company. "Take the universe, extracting from it the subsystem that represents the organization and what remains is its external environment". At first glance this separation seems simple of everything that exists beyond the boundaries of the commercial enterprise. In reality, this process is extremely difficult because environmental components are very numerous, dynamic, unpredictable and often turbulent for commercial enterprise.

In addressing the external environment of the enterprise there are the following:

-general environment and the specific environment;
-simple and complex environment;
-static and dynamic environment;
-realistic environment and perceived environment.

General environment contains all economic, political, social, legal, ecological and cultural conditions which may have an impact on commercial enterprise.

The specific environment is that part of the external environment that has direct relevance to achieving the goals of the company.

Simple and complex environment Correlation "simple-complex" is operational in the qualitative analysis of the external environment of the company.

Simple environment considers the environment in which the company is facing a number of relatively low and homogeneous factors.

Complex environment- factors are presented in great diversity. Businesses that are "moving" in such complex economic environment produce goods, have many suppliers with many component units, use complex and varied technologies (example: aircraft industry) etc.

Static and dynamic environment- The environment of a company may be relatively stable and predictable in the managerial practice and in business strategy development. The one constantly changing requires repeated adjustments and innovative attitude from managers.

The real and perceived environment- People's perception of a particular thing or phenomenon depends on the position that they hold.

It is necessary to make a separation between the objective or target environment (real) and the perceived by managers environment because this fact matters in making decisions.

Uncertainty is a state of the environment in which future conditions affecting an organization cannot be accurately or precisely assessed and provided. As the business environment of commercial enterprises is more uncertain, both managers have to make much more effort and to spend more time monitoring the environment, implications assessment of commercial enterprise and deciding on the present and future of actions undertaken by the company. The degree or level of uncertainty is based on two main factors: complexity and dynamism.

Environmental complexity refers to the number of elements in the environment of an organization and their degree of similarity. The environments in which we have a relatively small number of things and similar are considered homogeneous. In contrast, the environments in which there are a number of things and also unique (different) are considered to be heterogeneous. The elements of the environment become more heterogeneous, so that the managers have multiple variables with which they must deal.

The dynamism of the environment relates to the rate and the ability to forecast changes in the environmental elements of an organization. Environments, in which the pace of change is uncertain and relatively predictable, are considered to be stable. On the other hand, the environments in which the pace of change is rapid and relatively hard to predict are considered to be unstable. As the elements of the environment become more and more unstable, more challenging are these for managers.

The generosity of the environment

Another important feature of the environment is the generosity or the ability of the environment to support sustained growth and stability. The generosity of the environment can go from relative wealth to its relative poverty, depending on the level of resources available to the organization in its environment. Unfortunately, the environmental richness ultimately tends to attract other commercial enterprises.

3. CONTENT AND ENVIRONMENT DEFINITION OF COMMERCIAL ENTERPRISE

Enterprise commercial activity is influenced by a complex manner and in an increasing extent by the environment and its determinants.

Commercial enterprise is an open system, being influenced by other firms directly and indirectly by economic, social, technical, political factors of the environment in which it operates. Thus, the company takes from the environment raw materials, fuels, energy, equipment, labor, technologies, financial resources, management methods and techniques, which

are inserted in the internal processes of production and management, which shows products and services that are shipped to the same environment.

The environment definition of commercial enterprise

In the last period of time, a number of management specialists were concerned, directly or indirectly, to the issue of business environment, the impact that it has on the enterprise as a social-economic entity. One aspect still unclear from a theoretical perspective is to define environment, this is a particularly complex category, given its many components and interdependencies between them. The complexity of the concept of environment, its definition has led to a series of partial and simplistic approach and to a series of confusions such as that of the surrounding environment and the environment.

A number of outstanding scientific contributions in defining the enterprise environment have brought numerous Romanian authors such as Mihai Drăgănescu, Aurel Iancu Ovidiu Nicolescu, C. Pintilie etc.:

- „The social environment includes two main components: a technological environment and interpersonal environment. By environment for man we understand also society, while by the environment for society we understand only the natural environment, because the technological is social". (M. Drăgănescu, „O posibilă definire a mediului înconjurător", 1985);
- In its turn, A. Iancu insists on the need for dealing with environment in close correlation with quality of life, which, as a matter of fact, treats it decisive. As quality of life is defined by a variety of components, in the same way the environment must be defined by the multitude of its elements, called environmental factors that influence in a specific way the quality of life. (A. Iancu, „Mediul ambiant şi calitatea vieţii", 1985);
- In terms of origin and their role in economic and social life they can be classified as follows:

a) Natural environmental factors represented by soil conditions, atmosphere, underground, rivers, lakes, forests, all of them representing the primary material support of the existence and the deployment of biological and socio-economic life:

b) Artificial factors represented by the conditions created by man in order to improve their conditions of life and its multilateral development

In the same context, Professor C. Pintilie believes that the environment of economic unity can be defined by "internal and external market in which companies provide each other with products, services, works, information etc. collaborate and often confront among themselves, entering in the competition." Depending on the nature of ownership of production factors and of other elements of socio-economic systems, the same author defines market (environment) in: organized and planned, free or competitive mixed.

- "The environment includes all elements of the company, such as exogenous, economic, technical, political, demographic, cultural, scientific, organizational, legal, psycho-sociological, educational and ecological that underlines setting its goals, obtaining the necessary resources, adoption and implementation of decisions." (O. Nicolescu, "Management ", 1992).

From the definition above implies the need to approach to the environment in a dynamic and comprehensive vision, able to capture both convergent evolutions and divergence between its components, likely to promote or impede the progress of microeconomic activities.

Studying environmental issues and refine its multiple elements of its impact upon commercial enterprises are likely to facilitate, on the one hand, understanding the mechanism of formation, operation and development and, on the other hand, their complex dependencies towards the environment.

Simultaneously, it may be emphasized that the major influence that the environment has on business enterprise, on the economic and social effectiveness, an influence more and more obvious in the present and that must be taken into account in the foundation of strategies and microeconomic policies.

Furthermore, the relationship between environment and commercial enterprise manifests with intensity in terms of design and performance of the management process in an open vision, which is able to provide a higher recovery potential of the environment.

The concept of French specialists in the field of business environment seems interesting, according to which the enterprise environment is built of all organizations, actors and factors whose existence is likely to influence the behavior and performance of the enterprise. The institution and the individuals who can influence the enterprise and internal environment, which includes behaviors of individuals or groups of individuals within the organization as influencing market decisions and actions of other members of the enterprise (assimilated concept to organizational "environment", "moral" or "culture" within the company, resulting from conflict intensity, degree of satisfaction or dissatisfaction, the degree of adherence of individuals to the company values).

Environmental components of commercial enterprise

Environmental components of commercial business include enterprise microenvironment that consists of all elements with which it comes into direct relations imposed by the need to achieve the object of its activity. As organizations, that constitute the microenvironment of the company, it can be mentioned: providers, users, competitors, financial institutions, trade unions, mass media, various other bodies (consumer protection, labor protection, etc.), governmental and non-governmental organizations etc.

As influence factors of enterprise macro environment it may be referred to the assembly of general factors, with indirect action and long-term on business activity, factors of economic, technical, political, demographic, cultural, scientific, organizational, legal, psycho-sociological, educational and eco-friendly nature.

From the above one can draw the conclusion that the commercial enterprise environment consists of two main components, namely:

- Microenvironment of commercial enterprise;
- Macro environment of commercial enterprise.

Macro- and microenvironment components of commercial enterprise

From the point of view of strategic management for the development and assessment of a judicious economic strategy and, implicitly, a model of strategic management it must take into account all of these components, the intensity of their influence, their developments and the existing interrelationships between them and present and future activities of the company.

Microenvironment of the commercial enterprise consists of all the components with which it comes into direct relations. Such components include:

a) Suppliers of goods.
b) Service providers.
c) Labor providers.
d) Customers.
e) Competitors.
f) Public
g) Family Households
h) Intermediaries
i) Management and internal organization of commercial enterprise

Macro environment the second component of external environment is holding an essential place in terms of orientation of commercial enterprise activity in accordance with the needs of the society; it influences the company's actions through several types of behavior, such as: consumer and business behavior, behavior and the position of competition and governmental behavior.

Macro components are:

a) Geographical environment.
b) Economic environment.
c) Technological environment.
d) Cultural environment.
e) Political environment.
f) Legal environment.
g) Natural environment - relief and climate.

In the literature there are also other presentations of the determinants of the commercial enterprise, in one of the visions, the enterprise's business environment is addressed in the form of:

1. Endogenous or internals determinants;
2. Contextual or external determinants where they operate commercial enterprises.

4. MACRO COMPONENTS AND THEIR ROLE IN COMMERCIAL ENTERPRISE STRATEGIC APPROACH

The second component of the external environment, namely macro environment, has an essential place in terms of orientation of commercial enterprise activity in accordance with the needs of the society; it influences the company's actions through several types of behavior, such as: consumer and business behavior, the position of competition and governmental behavior.

As mentioned, the external factors of the environment of the firm are:

• Economic factors;
• Competitive factors;
• Technical and technological factors;
• Managerial factors;
• Demographic factors;
• Socio-cultural factors;
• Natural factors;
• Political factors;
• Legal Factors.

Economic factors

All the elements that make up the economic life of the space where the firm operates, determines its economic environment.

Economic factors are all elements of an economic nature in the environment with direct action on the microeconomic activities: domestic, foreign market, economic and financial levers, banking system, stock market, investment regime.

Group economic factors are particularly important, including a large number of factors such as domestic and international markets, the pace of the economy, purchasing power, financial potential, human resources, and infrastructure.

The economic factors concern the allocation of resources in society and therefore commercial enterprise management must follow in order to adopt the best decisions: the GDP level, the structure by sectors of the national economy, the development level of each branch, the budget deficit, the effects of recessions, the price developments, taxation, the economic development, population, the income development and distribution of social groups, the balance

trade, the financial foreign exchange position, the interest rates, the loan applications development, the inflation, the employment of labor, etc.

Management factors

Besides economic factors, exogenous management factors of the commercial company have a considerable influence over it. From management factors category - involving all elements that influence directly or indirectly the commercial company- belong, amongst others:

• Macroeconomic planning mechanism;
• The organization of the national economy;
• Coordination arrangements;
• Control mechanisms of systems;
• Motivational mechanisms;
• Quality of education;
• Methods and management techniques.

Technical and technological factors

Technical and technological environment, in the current era, is the force that causes the greatest impact. Technological developments affecting growth and maturity sector, affecting boundaries between strategic segments by modifying key success factors, are placed at the root or origin of new business (it does not produce what is required on the market, but it produces what results from exercising pressure in technology, to generate further market) or the disappearance of the existing ones (the danger of substitution can lead to the disappearance of demand). In many cases technological developments make the distinction between competitors (representing a source of competitive advantage).

Demographic factors

Another category of environmental factors, with high-impact on commercial enterprises, represent the demographic factors, which includes all the demographic elements which acting with the company, directly or indirectly. The mere enumeration of the main factors of this kind – the number of the population, the socio-occupational structure, the share of active population, birth rate, death rate, and life expectancy– we realize the complex manner in which it influences the economic unit. This situation is justified by the priority position on the human resources they occupy within the company, their quality depending on the microeconomic activity quality.

Socio-cultural factors Socio-cultural factors, which include social structure of population, health, education, culture, science, attitude with direct or indirect influence on the commercial enterprise, have a special significance in the market economy.

In many cases, the social and economic factors form the basis of the analysis of the purchasing and consumption behavior, education and training, quality of life and cultural developments, social dimension represents a factor of influence the strategic direction of business development. From interrelationships between social-business environment stands out: increasing requirements for segmenting markets, deepening market segmentation; enhancing the role of the ethics report of the demand-supply.

Culture can be seen as a set of shared values and characteristics that distinguish members of a group of people from those of another group.

Culture can therefore be observed through values, norms and behaviors of individuals from an organization.

Political Factors. Regarding the political factor, various authors have developed theories more or less complete. In appreciation of Some□an C. these authors are specific to each country and represent mainly structures of society, social classes, political forces, the degree of state involvement in the economy, the degree of stability of the political climate. The most visible components of the political factor are usually: the political regime, type of government, the political parties (one-party, two-party, multiparty, coalition), the degree of stability of the current

government policy measures, the degree of historical stability of policy measures taken (analysis is through an emphasis on the history of national politics), the fees, the attitude towards investors and toward foreign investment, economic regulation, legislation of environmental protection.

Legal Factors This side of the business environment influences its activity due to restrictions imposed on the conduct and which takes the form of laws and decisions of the Executive and local authorities requiring certain operations and is against the others; regulations and other normative acts detailing the application of law enforcement; reports made by companies on activity and achieved performances; other various provisions and instructions regarding, for example, the use of natural resources, prevention of environmental pollution, the government oversight of companies in financial difficulty.

Competitive factors

Competitive forces - are provided for items or elements that determine competition and hence the profitability of commercial enterprises. Their knowledge allows finding a position that the commercial firm, can protect the environment, or that it can influence in its favor.

Forces to be taken into account in modeling competition, differs from a commercial enterprise to another. Thus, on monopolistic markets, competitive determinant forces are substitute products (e.g. transport by road is the number one competitor for rail transport).

Natural or ecological factors The activities that these factors carry out, have according to the company's business profile, a certain impact on its surrounding environment, the latter, in turn, influence business activity in that it offers a favorable or, on the contrary, an unfavorable background.

The natural (organic) factors are, among others: natural resources, water, soil, climate, vegetation and fauna.

5. THE ROLE OF THE COMMERCIAL ENTERPRISE IN THE MARKET ECONOMY

Depending on the reporting level – micro- or macroeconomic, agents can be elementary or aggregated.

As economic elementary agent the commercial company has a number of distinctive features including:

- is subject to economic activity;
- embodies its own interests;
- has a specific behavior consisting of decisions and actions;
- has its own resources;
- is in relation to other elementary agents.

The smooth operation of commercial enterprises is reflected in profit-taking, which is mainly achieved through the use of economic levers: price, credit, interest, investments, etc.

The success of a commercial company in the market economy consists in conscious connection of logical developments at micro and macro level.

6. MANAGEMENT TRANSFORMATION ENVIRONMENT

First it is necessary to establish a clear business strategy of the business development of the resources. The starting point in establishing the strategy is to identify social needs in relation to the requirements of the commercial company's environment. This will set the priorities in the business system.

Environment, will determine the opportunities, objectives will be made concerning resources growth and not least it will proceed to assess the financial resources needed to implement the strategy.

Development strategy is based on established commercial business tactics in the interaction economic agent - environment. Based on established strategies and tactics it can be moved on to proper management of environmental transformation.

7. THE MAIN ENVIRONMENTAL FACTORS WITH INFLUENCE ON THE MANAGEMENT OF COMMERCIAL COMPANIES IN ROMANIA DURING TRANSITION TO THE MARKET ECONOMY

In the transition period involve radical changes in society and in the Romanian economy: change of the legislation, new institutions, while others disappear, the economy restructures, the forms of ownership change, the economic competition develops between firms – the society restructures as a whole.

All these changes generate a sum of factors influence business firms. Depending on the effect they have on business and company management, they can be grouped in two categories:

A. Contributing factors

B. Disturbing factors

A. Contributing factors have a positive influence on firms, to concrete their activities and efficiency. This category includes:

- Depoliticizing the management of economic firms;
- Autonomy of the firm's management and reducing state intervention in their work;
- Development of computer technology, informatics, technology and telecommunications, to increasing the possibility of improving training managers and contractors;
- Access of the firm to scientific research achievements and modern technologies;
- Enhancing economic relations between firms;
- Development of competition that favors diversification and qualitative increase in the production of goods and services, reduce costs, lower prices, etc.

B. Disturbing factors influence in a negative way the activities and performances of companies:

- Strained relations of management-union and economic-social instability
- Crisis of underproduction (raw materials, energy, fuel, agricultural products etc.).
- Obsolescence of goods offered on the market;
- Domestic demand due to decreased purchasing power;
- Reduction in external demand due to decreased export competitiveness of products;

8. MANAGEMENT REACTION OF THE COMMERCIAL ENTERPRISE TO THE INFLUENCE OF ENVIRONMENTAL FACTORS

While some theorists recognize the existence of limits on the ability of companies to manage and master environmental factors, other theorists see quite many environmental elements as something malleable for the manager's action and therefore advocate in favor of the action of modeling and adaptation of these factors.

1. Adaptation
2. Influence of environmental factors
3. Change of orientation

1. Adaptation

Adaptation involves changing the conduct of the activity of commercial companies so that they become more compatible with environmental characteristics. This procedure accepts the external environment as it is and seeks to find ways to adapt commercial company to it.

There are 4 methods to adapt commercial company:

A. A Buffer stock method

B. Method mitigate fluctuations

C. *Forecasting*
D. *Rationalization*

2. Influencing environmental factors

In contrast to the adaptation of this option involves attempting to influence environmental factors to make them more compatible with the company's activity. Instead to accept service environmental factors as such, a company can try to change them so that they become firm favorite. There are several methods of making such choices. The most commonly used are:

A. *Promoting products and public relations*
B. *Individuals interface*
C. *Recruitment*
D. *Negotiate contracts*
E. *Cooptation*
F. *Joint ventures*
G. *Associations of traders*
H. *Political actions*

3. Change of orientation

Changing the scope of the activity is another option for resolving environmental problems, which involves changing the products and services offered by the company, so as to benefit from the most favorable environmental factors.

REFERENCES

- C. Costea; D. Patriche, *Administrarea afacerilor comerciale*, Ed. Uranus, Bucuresti, 2002.
- C. Lovelock, J. Wirtz, *Services Marketing. People, Technology, Strategy, Pearson prentice Hall*, Sixth Edition, 2007
- D .Patriche, Ionescu V., Popescu M., *Economia comerţului*, Editura Uranus, Bucureşti, 2002
- D. Patriche (coordonator), E.A. Budacia, L.C.G. Budacia, M. Drăgusin, I. Patriche, M.Popescu, N. Popescu, Th. V. Purcărea, M.P. Ra□iu, A. S. Săseanu, L. Tăchiciu, *Tratat de Management Comercial,* Ed. Universitară, Bucuresti, 2007
- D. Patriche, *Bazele comerţului*, Editura Economică, Bucureşti, 1999
- D. Patriche, *Economie comercială*, Editura Economică, Bucureşti, 2004.
- D. Patriche, *Politici, programe, tehnici şi operaţiuni de comerţ*, Ed. Economică, Bucureşti, 2003.
- D. Patriche, *Politici, programe, tehnici şi operaţiuni de comerţ*, Editura Economică,Bucureşti, 2003
- Nicolescu O. (coordonator), *Management*, Editura Didactică şi Pedagogică R.A., Bucureşti, 1992
- Nicolescu, O. (coordonator)-, *Strategii manageriale de firmă*, Editura Economică, Bucureşti, 1998
- Nicolescu, O., *Managementul întreprinderilor mici şi mijlocii: concepte, metode, aplicaţii, studii de caz*, Editura Economică, Bucureşti, 2001
- Nicolescu, O., Verboncu, I., *Management*, Editura Economică, Bucureşti, 1999
- Niculescu, N.G., Adumitrăcesei, I.D., *Spre un nou echilibru macroeconomic. România la cumpăna dintre secole*, Editura Junimea, Iaşi, 2003
- O. Nicolescu, *Managementul intreprinderilor mici si mijlocii,* Editura Economică, Bucuresti, 2001

- O., Nicolescu; I.Verboncu, *Metodologii manageriale*; Editor Tribuna Economică; Bucuresti, 2001
- Ogrean, C., *Promovările schimbării – determinante ale abordării strategice a managementului firmei*, Economie şi finanţe, nr.2, Chişinău-Sibiu, 2000
- Patriche (coordonator), E.A. Budacia, D.A. Smedescu, *Management comercial – structure instrumentale, tematici de referate si dezbateri, studii de caz, lucrări practice, lucrări de licență, teste*, Ed. Universitară, Bucuresti, 2008
- Patriche (coordonator), *Tratat de Management Comercial*, Ed. Universitară, Bucureşti, 2007.
- Patriche (coordonator), V. Balaure, M. Bălăsescu, S. Bălăsescu, A.E. Budacia, L.C.G. Budacia, C. Constantin, M. Drăgusin, I. Patriche, Th. Purcărea, M. P RaŃiu, I. Smedescu, D. A. Smedescu, A. Tecău, I. B. ChiŃu, F. StremŃan, V. Neagu, I. Ivănescu, O. FolcuŃ, C.I. Negricea,A. M. Dobre, A. Perju, A.R. Topor, *Dicționar Explicativ de Management Comercial*, Ed.Universitară, Bucuresti, 2008.

FINANCIAL RISK AND INSURANCE CREDITS

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Abstract: *With the global economic crisis and the issue of precautionary measures granted in loans acquired new dimensions. However lending continued just the segment of economic development, this dynamic can not be stopped, even if the vast plateau known restrictions. On this phenomenon on will be short breakdowns in this article.*

Keywords: credit, risk, credit insurance

JEL (Journal of Economic Literature) Classification:
http://www.aeaweb.org/journal/jel_class_system.html

1. PARTICULARS OF CREDIT INSURANCE

Business is subject to various risks. Every year tens or hundreds of thousands of companies worldwide are failing left with big debts partners. Not infrequently the reason is the insolvency of their buyers, which makes it impossible to recover these amounts and therefore continues flowing series of problems on others.
Most traders enter and conduct business transactions without real protection against this danger: not charged to buyers value the goods sold or services rendered. On the other hand, if the past could talk initiated or conducted business on his own money, this is unthinkable today. In the modern world has moved from slogan "buy now and pay now" to "buy now and pay later"; Although credit is primarily trust, however, the protection of creditors for the risk of not recovering the amounts lent. This is done through a form of insurance to financial losses. Insurance related business activities affected by the economic situation and the possibility of the buyer to pay liabilities to maturity are known as financial and political risk insurance. The name comes from the fact that money covered losses and no damage to property or liability. Due to the risk characteristics and specific assessment methods, these types of insurance are not usually the objects of ordinary insurance company, but are used by specialized companies. Commercial credit is the value transferred by a buyer seller trust and time before reimbursement by the buyer value as payment.

Financial security for bank guarantees are different. By providing financial risks are taken only under certain conditions, while involves taking unconditional bank guarantees all obligations.

Commercial guarantees, from those responsible need to give guarantees against default, began to be used thousands of years ago. Such a guarantee was provided through one or more private guarantee or assume liability for the risk of default. Credit insurance: - protect traders and manufacturers against the risk of default by customers who purchase or lease goods or similare. Ea credit facilities have emerged as a necessity stemming from the fact that most trade agreements concluded in terms the payment is partially or completely after delivery of the goods or services covered by the agreement, so the payment delayed or selling on credit. Such credit insurance can not eliminate fear seller on the buyer paying the amounts due to him providing protection for the risk of default. The reason may be the financial situation of the buyer or if the sale takes place in a country other than that in which the seller, causes related to the situation of

the importing country (regulations, war, and so on).'s Why credit insurance is as a direct protection against the risk of not collecting vendors and at the same time, as a guarantee to the bank, is also a possibility of access to finance.

In other words, to ensure credit is to protect against financial loss resulting from default, insolvency or insolvency buyers who purchased goods on credit or insolvency of credit beneficiaries.

The credit insurance contract are substantially protected venues from trading in terms of not collecting on the insurance risk transfer and consequently can increase turnover. Insurance credit insurance is considered a luxury, it is operating under optimal conditions feature and the market economy with a stable and well-developed credit. Globally, most credit insurance is practiced in developed countries.

Investigation begins when credit risk and requires knowledge listing status debtor, periodically checking its payment capacity. This is done by the underwriter. Supervision takes place after issuance policy by supporting the insured to recover and administration delayed payment amounts, even for initiating legal procedures necessary for recovery, if any. In this regard, there is considerable professional solidarity by Berne Union and the Credit Alliance.

Need for it can be considered as a risk management measure, since it limits the repetition of similar situations other insured for the same customers.

Although insurance against these risks is available on the domestic and international insurance markets, only a relatively small number of merchants worldwide turn to them. It is important to note that regardless of the size of the risk, there are three requirements to make:
1) Prevention, by gathering and interpreting customer information in order to minimize the risk of default;
2) debt collection, ie the ability to recover debts anywhere in the world, regardless of differences of language, culture and legal system;
3) ensuring that payment of compensation in case of default of the debtor insured.

Insurable risks can be grouped into two categories:
1. Commercial risks that are related to the financial situation of the buyer and include:
a) non-payment due to insolvency of the buyer;

Insolvency can be for various reasons such as bankruptcy, any action for enforcement debtor's property which resulted in full payment of amounts billed for insured; enforce a judgment approving a composition between the debtor and its creditors, compositions without judicial proceedings with all creditors or most of, suspension or moratorium on payments due the debtor offering or any similar action under the law of the debtor country.
b) the buyer's refusal to accept the goods contracted for reasons beyond the seller.
2. Political risk, which is a separate category, but very important to the proper evaluation of the possibility of the return of credit and default risk of default.

This risk occurs only in export credit insurance. It can be caused mainly by "subjective elements" exist in the importer's country. By producing one of country risks, the entire contractual relationship between partners can be damaged.

Political risk may result in:
a) difficulties and delays (more than a certain number of days, usually 180) in the process of transferring goods from buyer's country, following a general moratorium, regarding the external debt, the government said in buyer's country or government a third country through which payment is made;
b) the respective amounts of land transfer failure importer exporter country as a result of government action in that country (the buyer) implies the fulfilment of the export or cause delays in transferring the money;
c) introducing regulations on export or import licenses buyer's country, withdrawal or non-

renewal of the export license or imposing trade restrictions, after the entry into risk; d) war, civil war and other similar events abroad exporter that make it impossible to fulfil the export contract if the damage is not insured as commercial risk;
e) risks to public buyers, the buyers are those servants entities can not be declared bankrupt; f) losses resulting from the inability to institute legal proceedings in the buyer's country due to lack of or poor functioning of the legal system in that country.
3.Riscurile caused by force majeure caused by natural disasters are generally unpredictable and natural phenomena manifested by force majeure buyer unable to make payment to the supplier (earthquakes, floods).
4.Riscurile manifests currency exchange transactions. For this, the contract provides for payment in a currency other than that provided for in the contract, because the exchange rate may change during the time the contract until payment.

This type of risk has several forms:
- Foreign exchange risk
- Risk of increased manufacturing costs due to inflation of goods contracted
- The risk of fluctuating interest rates.

Particularly for export credit insurance, insurable risks are dangers involved in selling goods or services on credit abroad.

Prolonged non-payment is a risk that can affect the financial situation of the insured. Is considered event of late payment when the debtor or guarantor of the debt not paid by a certain agreed period, usually 6 months from the date specified in the contract. Force majeure, difficulties in transferring money or political causes natural disasters, epidemics or any form of violence in society are in principle exempt.

Excluded risks:
- Claims in respect of goods or services inappropriate
- Penalties or other losses related to non contractual obligations under the contract of sale signed by the seller (provided) to the buyer;
- Losses from exchange rate differences;
- Damages due to political risk (decision or ruling provisions of state organs, civil or military, which prevented the buyer to take general measures to comply with the obligations under the contract, not carrying, so pay abroad);
- Damages as a result of declared or undeclared war, civil war, revolution, insurrection, rebellion, sabotage or other similar events;
- Damages due to natural disasters (cyclones, floods, and earthquakes, volcanic eruptions, overflowing sea, hurricane, tornado or other similar events).

2. TYPOLOGY OF FINANCIAL RISK INSURANCE

Financial risk insurance include:
A) credit insurance: domestic credit insurance, export credit insurance, credit insurance and credit insurance rates investment;
B) fidelity insurance.
C) political risk insurance
D) providing guarantee (bail).
A. Provision of credits in a substantially eliminates the risk of financial loss, especially when it comes to high-value transactions or business partner number is relatively low, this can result in a difficult situation where one or Most debtors do not pay their payment obligations. However credit insurance are not always profitable, especially if the individual loans are reduced and risks are spread over a large turnover. Credit insurance is indemnity insurance, as it involves compensation paid policyholders for losses suffered as a result of insolvency or default of the

insured customer, not an event "physical" as the other insurance. Therefore it is a pecuniary insurance, and no material financial loss.

Differences between ordinary insurance, and credit insurance compensation from the nature of risk and stakeholders, namely:

- The credit insurance involved three parts, each aware of the other.
- Responsibility for repayment is the borrower and guarantor liability (insurer) is on the second, being responsible only if the first fails to fulfill the obligation of payment for reasons contained in the insurance contract.

3. DOMESTIC CREDIT INSURANCE

A special place is to ensure that credit is to protect traders and manufacturers against financial damages caused by insolvency buyers. Credit insurance first attempts were made in France in 1850. By specialized companies American Credit Indemnity Company was (1893). Credit insurance is specific to market economy implies a developed credit system. In our country, prior to 1889 was performed only export credit insurance. Domestic credit insurance: A special place is to ensure that credit is to protect traders and manufacturers against financial damages caused by insolvency buyers. Credit insurance covers all risks in distribution and production stages. Insurance issued vary by legislation and customs of each country, and can be used in an individual transaction or a continuing business fluctuations. An alternative is special policy that provides a number of transactions with one or more buyers for a period of 12 months. Another alternative is the general political turnover on credit, which ensures all transactions carried out over a period of 12 months. For the issuance of such a policy, investigate system shock on the entity provided regarding: business volume for the previous year, previous loan amount, structure and creditworthiness of buyers, vendor credit volumes, the volume of transactions issued during the period of insurance. Credit insurance policy does not cover damage Orin the damages. Insured bears to 20% -25% of the loss, practicing with limited liability franchise system. Sum insured may be appropriate: turnover during the reference or transactions with partners' nominated volume. The domestic credit insurance, the insured is protected against the risk of default by the buyer or prolonged its insolvency during the period between production and distribution, usually before final sale to the buyer.

There can be several types of contracts:

- For a single transaction;
- For a certain period on the basis of turnover - the administration of the insurance is expensive and requires a large amount of work, that is used for high value transactions;
- For a limited number of transactions;
- For one or more buyers, the insured free to decide on them. It is concluded for a period -12 months-;
- Turnover on credit - the most used vendor provides all businesses with one or more buyers for a specified period;
- For multiple accounts of an insured when coverage is limited to those customers who exceed a certain fixed level of debt and whose default extension will have a big impact on the availability of cash in the account of the insured.

These types of low-cost insurance administration, the insurer may avoid antiselecția because customers will require insurance for all credit contracts, not only for those with a high risk and will be able to check the solvency and creditworthiness of its customers through risk assessments and the insurer.

4. EXPORT CREDIT INSURANCE

The most common form is the general policy on turnover except that refers to the

importers who buy on credit. The main difference from the domestic credit insurance is that if the export credit insured importer operating in another country, so that risk assessment must consider many factors outside buyer, or factors related to country. This refers to country risk, which is assessed by an analysis of the political and economic factors, plus legal, risk factors, buyer country's custom.

This analysis is important because, although credit to ensure identical for traders of any country, defining insolvency of insurance policies and the procedures provided payment amounts may differ.

Export contract is to: delivery of goods, performance of lurcari or services, sale of investment licenses and patents in favor of foreign buyers or beneficiaries. Since, most often, the Contracting Parties agree, by contract, on a time gap between delivery and payment, the supplier provides the buyer a credit foreign trade and, therefore, the provider assumes the credit risk of the exporter and the cash effects of operations Export with deferred payment. This involves blocking the financial resources of the provider for a period of time and requires unlocking the call to bank loans. Bank credit insurance mechanism correlates with dress forms that export credits: supplier credit, buyer credit, credit-aid from public sources. Export credit insurance covers a multitude of risks, through the eyes of when that might occur, are grouped into: risks and risks prior to signing the contract after signing the contract. Increased competition internationally leads firms to launch firm offers valid for a certain period of time. Changing economic conditions within the validity period of the offer (price, interest rate, exchange rate) may lead to exporters, the concluding commercial contracts, some losses can not be recovered from the importers.

In the later stage of conclusion, may occur a number of risks: specific interval between signing the contract and delivery of goods or specific interval upon delivery and collection of their value.

Contract to export credit insurance takes effect, if aigurării claims resulting from sales of goods, the date of first delivery of goods and their rights passed on to foreign buyers, and for insurance claims resulting from the provision of services, the date of the first performance. Liability insurer terminates the last maturity of loans to, if it was fully repaid or together with payment of compensation by the insurer or the termination or cancellation of the insurance contract.

Excluded risks. The most common exclusions of such a type of insurance policy include: claims in respect of goods or provision of services inadequate, penalties or other losses related to non-compliance with contractual obligations, fines of any kind, foreign exchange losses; production losses due to political risks, losses caused by civil war, revolution, losses caused by natural disasters.

Sum insured for this type of policy can not exceed the amount of foreign bill. In general, the sum insured is expressed in foreign currency commercial contract has been concluded. Franchise ranges in practice from 10 to 50%, a percentage determined by: cumărătorului creditworthiness and solvency, economic sector, country of export is made, the period of the loan.

The insurance premium is determined by the first quotation determined by the insurer based on the criteria listed. In general, the premium paid in full in advance for the entire period of the contract. Security agreements for periods greater than 1 year, the premium may be paid in annual installments.

Compensation payment is made on the basis of documents proving the debtor's insolvency or non-performance of commercial cases. The most common situations include: overcoming the prolonged waiting period by paying the initiation of bankruptcy proceedings. To establish damages, the amount of damage less: payments from borrowers until the contingency

insured proceeds from realization of collateral, any insurance premium payable by the insured to the end of insurance, deductibles set by the insurance contract.

5. PROVIDING CREDIT RATES

As an alternative to credit insurance, credit insurance grew loans rates currently being used for loans to be reimbursed for payments spread over a period of time. This type of insurance the insured requires participation of approximately 25% of the loan amount. Insured seller by credit or retailer or manufacturer. In general insurance ends ends turnover insured to avoid it to provide more loans, so to avoid antiselecție.

Investment credit insurance:

Credit insurance investment account involves providing medium and long term debtors, practicing insurance with general insurance contract turnover on credit. This does not preclude the conclusion of individual contracts. It is used for the export of capital goods, loans, etc.. while ensuring the leasing transactions.

It serves its holder or account debtor to provide medium and long term. Most common policy is the general political turnover (individual transactions are used less often). This type of insurance is used both to ensure exports of goods and those of capital (in the form of loans or equity investments).

6. FIDELITY INSURANCE

Is to ensure the rights or property interests, and are therefore classified as property insurance. These assurances are intended to give protection to a company as the insured against damages caused its assets as a result of dishonest or fraudulent acts of its staff which manages a part of them, whether they acted alone or with others.

There are different types of insurance:

- Aims to guarantee loyalty to an employer compensation for losses caused by employee dishonesty (eg cashier can steal money society sellers in shops). Compensate the money is stolen or destroyed or damaged goods insured employees.

This insurance shall be covered only actual damages, not consequential losses or costs incurred by the insured to determine the actual loss. These contracts may be issued individually for each person, for certain items or may be general, ie for all employees of a company usually amounts to each of them is ensured. In the latter case, changing one of the employees included in the contract should be immediately notified the insurer.

To conclude insurance, insurance claim completes employees, which will attach a special request individual personal data is requested marital status, properties in possession, salary, previous job, financial situation (debt, bankruptcy, insurance life). The employer longer required details of the recruitment and selection of staff recruitment and references used to verify them. General policies are often used to provide financial institutions (commercial banks, brokers, credit unions, etc.). Well as for companies in other areas that could be affected in this way. Some financial institutions are required to guarantee fidelity insurance against the risks of fraud and dishonesty employee theft during transport, deception, counterfeit even abductions. In recent years claims paid by insurers highest fidelity was determined to electronic fraud, theft by computers and the Internet. As you can see there are many factors that influence the success of granting a loan. On one hand, bank credit granted that recoverning - and the amount borrowed and the interest accrued, on the other hand acquiring credit that touching - and objective - economic capital.

7. BIBLIOGRAPHY

- O.U.G. nr.64/2007 debt, published in the Official Gazette nr439/29 June 2007
- www.bnr.ro
- www.zf.ro
- www.mfinante.ro
- www.capital.ro

PARADOXES OF ROMANIAN ROADS

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Abstract: *According to the 98 Explanatory dictionary paradox is a contradictory statement and, at the same time, arguable or an (absurd) opinion contrary to the unanimously accepted truth. The paper deals with the theoretical issues regarding the Romanian road transportation and its paradoxes. The paper ends with conclusions drawn from the conducted study.*

Keywords: road transport, roads, paradox

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http://www.aeaweb.org/journal/jel_class_system.html

1. ROMANIAN ROAD TRANSPORT

The road transport has an increasingly important share in the transport structure in Romania. The share of goods' transit is much lower than that of transported quantities, because this type of transport is mainly used for short and medium distances, where it has maximum efficiency (Sima, 2010).

Road transport owes its evolution to the characteristics of the services carried out, by:

a) Accessibility, which for the road transport is maximum;

b) Commercial speed (of the goods) is relatively high also because of the fact that vehicles are not running upon a fixed schedule, being able to go on road immediately after the loading is finished;

c) Reduced transport capacity, which allows the possibility to use some maximum coefficients of the capacity's usage;

d) High degree of protection of goods is due to the closed storage spaces of goods and suspensions' performance;

e) Fast charging is linked also to the relatively small capacity of the cars.

The great majority of road transport do not use terminals, but use the "door to door" method. However, activities related to incomplete cargoes and not only require mandatory terminals which can be: collection and distribution terminals, separation and regrouping terminals and terminal for rest.

The organisation of freight activity must take into consideration the existing infrastructure, the handling and transport conditions, the type of goods transported, which can determine the use of special-equipped vehicles.

The organisation of passenger transport considers the population's needs of circulation, which is determined by studying the statistics or by making surveys and research on the road.

In our country, the highways and national roads are managed by the Department of Roads from the Ministry of Transport, county roads are managed by the country councils, parish roads are managed by parish councils.

The development and modernisation of road network should increase efficiency of transports. In order to do this, future constructions, road developments and modernizations should be conceived, ever since the research-design stage, in a way as to require the lowest specific investment, to survive in the best possible traffic conditions, to have the best possible

road-holding (so that traffic at high speeds is safe).

The importance of road transport has increased worldwide due to a real road network and of the various technical and technological innovations in the automotive industry. The continuous escalade of ecological problems, including the global warming danger, caused in part by burning fuels such as led many people to believe that the use of vehicles on the roads should be severely limited. Heavy traffic, noise and vibrations caused by heavy trucks are other disadvantages. Road transport is also a major consumer of natural resources which are increasingly scarce. As compared to the rail transport, the road transport has an efficiency of only ten percent, when both systems are working at maximum capacity (Information document, http:// www.scritube.com/geografie/Drumuri-rutiere-europene).

Using cars on an increasingly larger scale has had various effects on the society. The increase of the number of cars owned by individuals contributed a lot to the development of suburbs, inhabited by those who work in the big cities, but who do not like to live in an urban environment. Cars are also responsible for the traffic jams occurring especially at peak hours. In order to handle an increasingly more intense traffic, it was necessary to build new, wider road networks, leading, however, to an increased pollution of air, dust, noise and vibrations.

Some governments have introduced severe laws that should have an effect on reducing pollution, while the population has become increasingly more interested in technological achievements and embraces the introduction of cleaner fuels, computer-routed buses and the development of new types of transportation, such as monorails, moving pavement and high speed, advanced technology of passenger trains. The rapid changes that are currently happening will lead to the increase of local and international transport provided that it is faster and cheaper. Ecologists will have even a tougher task to handle and counterbalance the negative effects of pollution.

Auto transport is the most effective on short distances.

As for the long distances transport, such as the international transports, the auto transport turnover is two times higher than that of the rail wagons, which helps accelerate the production and sales processes, the increase of efficiency of using the vehicles (Niță, 2009).

The production of vehicles requires lower specific investments and the drivers' training is done with fewer costs and shorter time than for the rail, shipping and air transport.

2. THE SITUATION OF HIGHWAYS IN ROMANIA IN THE PAST, PRESENT AND FUTURE

It is true that Romania inherited from the communist regime a small road infrastructure but the time that followed did not bring favourable results in this respect either.

On paper in communist Romania there would have been 3200 km of highway, although only 113 km were made (of which 96 kilometres on A1 between Bucharest and Pite□ti and 17 km on A2, from Fete□ti to Cernavodă) (Vioreanu, V. De ce n-a făcut Ceau□escu autostrăzi, online article, http:// www.capital.ro – 14.10.2011)

The rest were about to be finished gradually, depending on the results obtained from the censuses that would have reflected the priorities in this respect. No wonder that the in contemporary conditions, what has been achieved no longer corresponds to current requirements. If we consider the cost standard, we can say that the 3.200 km built by Ceau□escu in 1967 would have cost 18,8 billion euro. If in 1900 Romania had started to build the highways designed by communists until 2010 it would have meant the allocation of 944 million euro per year for highways, i.e. 160 km of highways per year. With regard to money, in 2011, for example, CNADNR demanded around 1,2 billion euro for highways, which does not make quite impossible the amount of 944 million mentioned above. Although the problem of road infrastructure is essential, the results obtained after more than twenty years are at least strange.

Romania currently has 370 km of highway, on the routes Bucharest-Cernavodă, Bucharest-Piteşti and Câmpia Turzii-Gilău. Moreover, last year the sections Timişoara-Arad (32 km), Constanța beltway (approximately 8 km) and Medgidia-Constanța (around 25 km) were opened, without being completed. Other 434 km (4,09 billion euro) are currently under construction, pending the signing of contracts 25,6 km (134 million euro) and under open tendering process 111 km (1,1 billion euro).

Two years from now, if the authorities will manage to keep their promises, Romania will have at least 300 km of beltways, almost as many kilometres of highways it currently has. In the pessimistic scenario, however, where the only 34 kilometres of Arad's and Constanta's beltway will be finished, we will travel on approximately 170 kilometres of beltway roads in two years' time. There are plans for another 49 beltways for the following years, but CNADNR has not yet mentioned neither when they will be auctioned, nor the funding for them (Neferu, A., Până în 2013 vor avea şosele de centură încă 16 localități. Planuri pentru alte 49 "pe hârtie", online article http:// www.zf.ro – 11.02.2011)

Table 1. *Beltways for which the auction started in 2010 or will begin in 2011*

Locality	Section length (km)	Estimated value (mil. euro)	Estimated value/km
Săcueni	7,6	10,7	1,41
Carei	10,46	12,7	1,21
Târgu - Mureş	36,2	15,8	0,43
Bacău	30,8	97	3,14
Tecuci (section II)	6,95	26	3,74
Braşov	18,0	143,8	7,88
Craiova Sounth-East	6,28	19,1	3,24
Caracal	10,35	17,5	1,68
Alexandria	13,28	23,6	1,77
Mihăileşti	3,18	23,6	7,42
Bucharest (between A1 – DN 7 and between DN 2 – A 2)	20,2	140,5	6,95

Source: *data from the Ministry of Transports and processed by the author*

With the data from table 1 the graph from figure 1 was made, which presents the length of the beltways, their cost and also the cost per km.

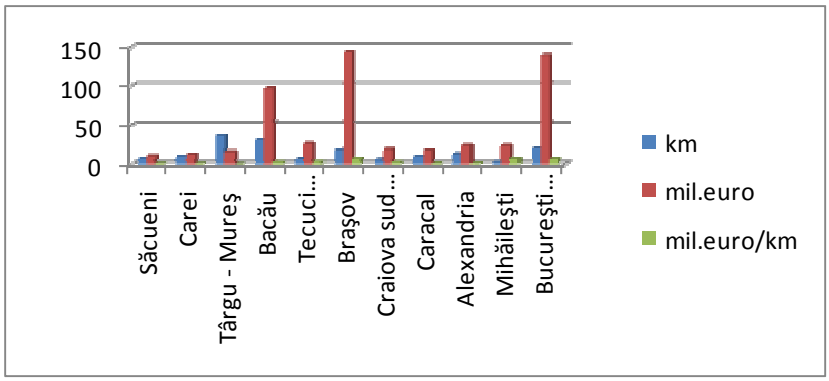

Figure 1. Length of beltways, their cost and the cost per km
Source: *data from the Ministry of Transports and processed by the author*

By analysing the data and the chart, the following can be noticed:

- The length of the beltways differs from one locality to another, with values between [6,28;3,80];
- The costs/km differ from one section to another, considering, of course that the landscape is different but it also differs very much in the same category of area, the top area being Brasov and Bucharest beltways (A1-DN7; DN2-A2) with values of 143,8 and 140,5.

5. THE PARADOX OF THE ROMANIAN ROADS

There are several paradoxes related to the construction of highways in Romania, mainly related to each other.

Paradox: While admitting that Romania needs a road infrastructure development and that the budget is low, the most unprofitable contracts are, however, being signed so that works are performed with great delays and unimaginable costs.

Why is this happening?

Things start wrongly because Romania uses for the auctions for highways the same model as that for electrical equipment. This model is not used today in any country for the construction of highways, because it induces large additional costs, waste and over 50% more money into the constructors' pockets. Therefore, through models agreed by the EU, the state tells the constructors exactly what it wants to get and in their turn, they say exactly how much it costs and, in the event of errors, or if the state wants something different, it pays. In our country, the state rarely says what it wants and the constructors rarely say the exact costs, therefore they overdraw the amounts above the margin of reserve because they know that later they can not ask for more.

When it comes to public spending, there is never a bottom to the bag. Proofs are the costs for the Capital's infrastructure projects, whose prices have risen by hundreds of millions of lei from the announcing of the investment to its completion. For example, the initial cost for Basarab Corridor increased by almost 300 million lei, for Lia Manoiu stadium by 260 million lei and for the road Buzeşti-Berzei-Uranus, from 62 million lei, to 365 million lei, and the road is far from being completed. For the expansion of Pipera Road it was started from the amount of 32 million lei and it is estimated that the work will cost about 120 million lei (Ivanov, C., The great infrastructure projects in Bucharest, more expensive by hundreds of millions of lei at the end. How did the works become more expensive by additional contracts?, online article http:// www.economie.hotnews.ro).

After many years in which highways in Romania managed to cost even 20 million euro, Romania is finally making highways at a lower price. One of the explanations for the lower costs would be that most sections that are currently under construction are made on European money, so they are more closely monitored both in terms of quality and on how completions terms are complied with and of costs.

The cheapest highway built in Romania in the last two years is Timişoara-Arad, where, the cost per kilometre is of approximately 3,5 million euro (Neferu, A., După ce s-au plătit 20 de mil. euro pe kilometru de autostradă americanilor de la Bechtel, acum un kilometru poate să coste 3,5 mil. euro, on-line article, http:// www.zf.ro -11.04.2012).

Romania and Bulgaria, two countries that are often comparable in the EU when it comes to economy, wages, prices and resources, operates differently when it comes to building highways.

Romania is paying at least 5 million euro for a kilometre of highway and Bulgaria only 2-3 millions euro.

Bulgaria's Road Infrastructure Agency (RIA) opened the auction for building 16,78 km

of highway, lot I from Struma highway (Dolna Dikanya – Dupnita). According to the Bulgarian press, offers, without VAT, were between 58 and 117 million leva, i.e. between 29 and 58 million euro, which means between 2 and 3,5 million euro per kilometre. Even at these low prices, companies crowded to the auction for building the highway, located in a hilly area in Bulgaria, at the western border of this country and South of Sofia (Cireaşa, D., De ce plătim dublu autostrăzile față de Bulgaria, www.romanialibera.ro – 29.07.2011).

The Bulgarian State Agency had no less than 17 bids from construction companies in Italy, Bulgaria, Austria, Greece, Spain, Turkey, Azerbaijan and Germany, the auction documentation being initially purchased by 50 companies. According to the auction documentation the highway includes at least seven works of art, bridges, corridors, viaducts. The highway's project is financed by European funds just like the highway auctioned by the National Company of Highways and National Roads in Romania (CNADNR), Nădlac-Sibiu. In the latter case the prices were between 4,1 million euro for the sections Nădlac-Arad or Timişoara-Lugoj and 7,1 million euro per kilometre for Orăştie-Sibiu. Thus it can be stated that the difference between a kilometre of highway in Bulgaria and Romania is double.

Among the most unprofitable infrastructure investments of the last years there are (Davidescu, L., Top 3 the most unprofitable infrastructure investments, http:// www.riscograma.ro – 2.04. 2012):

- Băneasa airport runway that was modernized in 2007 with 20 million euro worked for just 5 years then the terminal was closed for additional works of 7 million euro, being further used only for VIP and charter flights. The money invested will never be covered and with the current destination the market is so small that not even operating costs can be covered;
- Basarab Corridor which, given the construction of the masts, it might seem to be crossing an enormous river, but in fact it stops over a railway that ends in 500 m. When the opportunity of building the corridor was under discussions there was also the option of building a new railway station close by so that the avenue remained on zero ground. The most damaging option was chosen in this situation, too;
- Bechtel highway, whose route was challenged from the very beginning and which the building company received without tender. All negotiation attempts were later turned into an advantage for the builder and it became the most damaging option in the history of highway constructions in Romania.

Paradox: Although there are cost standards for highways published by the Ministry of Transport, some roads in Romania far outweigh these provisions.

Costs standards published by the Ministry of Transport establish that one kilometre is not to cost more than:

3,8 million euro in the plains;
4,9 million euro in the hills;
6,1 million euro in the mountains.

For example, Bucureşti-Moara Vlăsiei portion costs 8,2millions/km, although it is located in a plain, while Lugoj-Deva highway, lot 1, located in hill area, costs 5,8 million euro per kilometre.

The 434 kilometres of highway that are currently under construction in Romania cost around 6 million euro, i.e. approximately the maximum indicated by the cost standards imposed by the Ministry of Transport for the highways built in mountain areas.

Paradox: Although Romania is facing a serious lack of highways, when it is decided to build such roads, sections that are not subject to heavy traffic are selected, over others with more intense traffic.

We complain that we do not have highways, but when we have them we do not use them.

But that is not our fault, but the state's, because it does not connect the small highways to towns. This is the case of Arad – Timi□oara highway which is not used by the inhabitants of Timisoara (Vioreanu, V., AUTOSTRADĂ construită DEGEABA? \"Nu prezintă interes\", online article, http://www.capital.ro – 22.05.2012).

Sun Highway is used less than at least ten roads in Romania (Neferu, A., Topul celor mai circulate drumuri din România. Autostrada Soarelui a fost făcută degeaba din punctul de vedere al traficului: Nu intră în primele zece!, online article http:// www.zf.ro – 1.09.2011).

Table 2. *Top of road sections with the highest traffic in Romania*

Current no.	Traffic intensity [number of vehicles/day]	Sector	Length [km]
1.	54.134	Bucharest – Otopeni beltway	3,6
2.	53.260	Bucharest – Bucharest Beltway	5,4
3.	47.781	DJ 401 – DJ 711 A	18,7
4.	45.618	Bucharest – DJ 401 A	19,9
5.	42.745	Bucharest – Bucharest Beltway	3,7
6.	39.170	DJ 101 C – Ploieşti	17,5
7.	37.667	DN 22 – Constanța	9,2
8.	36.189	DJ 7038 – DN 658	12,1
9.	32.554	Buzău – DJ 203 K	3,3
10.	31.205	Otopeni – DJ 101 C	20,1

Source: *data taken from CNADNR and filled in by the author*

From the data in table 2, it can be noticed that the most intense traffic is on the sector Bucharest Beltway – Otopeni and for the Sun highway values fall in position 7 with 37.667 vehicles/day.

Paradox: Although the Romanian citizen's living standard has dropped from year to year, we are still paying more than most Europeans to travel on roads.

Romania does not have many kilometres of highway, in fact, it does not have highways, but, starting with next year, express-roads could begin to be used. Regardless they are being built with our money or from European funds the fee would be of around 5 euro, if the European Union agrees to charge fees for the highways. The final decision on this will be taken in 2013. We are talking of all the 322 kilometres that Romani has, from Bucharest to Piteşti, from Bucharest to Cernavodă and the 52 kilometres from of Transylvania highway, but also for the 280 kilometres that are still under construction between Nădlac and Constanța. The road toll will make the Romanians circulate less. We are already on the last place in the European Union for the quantity of fuel we can afford to buy from an average salary, only 265 litres, while the Bulgarians can afford 2802 litres. If we will have to pay five euro to get from Bucharest to Piteşti, we actually give up four litres of petrol (De la anul, taxa de autostradă ar putea costa cinci euro, http://www.antena3.ro, 8.06.2011).

4. CONCLUSIONS

Given the conducted study, the following can be concluded:

- The Romanian infrastructure is underdeveloped;
- The timid attempts to solve this problem mostly end up in failures, meaning that:
- the most damaging solutions are chosen;
- auctions favour the builders;
- deadlines are exceeded and they attract new costs;
- the works performed are weak in terms of quality and in very short time they

require fixes, therefore new costs.

6. REFERENCES

- Niță, V., Mangementul sistemelor de transport, Editura Tehnopress, Iaşi, 2009, p. 28.
- Sima, E., Managementul transportului public, Editura Academia Forțelor Terestre „Nicolae Bălcescu”, Sibiu, 2010, p. 15.
- *** De la anul, taxa de autostradă ar putea costa cinci euro, http://www.antena3.ro, 8.06.2011
- *** De ce n-a făcut Ceau□escu autostrăzi, articol online, http://www.capital.ro – 14.10.2011.
- *** AUTOSTRADĂ construită DEGEABA? \"Nu prezintă interes\", articol on-line, http://www.capital.ro – 22.05.2012
- *** Marile proiecte de infrastructura din Bucuresti, mai scumpe la final cu sute de milioane de lei. Cum s-au scumpit lucrarile prin contracte aditionale, articol on-line http:// www.economie.hotnews.ro.
- *** Până în 2013 vor avea şosele de centură încă 16 localități. Planuri pentru alte 49 "pe hârtie", articol on – line http:// www.zf.ro – 11.02.2011
- *** Topul celor mai circulate drumuri din România. Autostrada Soarelui a fost făcută degeaba din punctul de vedere al traficului: Nu intră în primele zece!, articol on-line http:// www.zf.ro – 1.09.2011.
- *** După ce s-au plătit 20 de mil. euro pe kilometru de autostradă americanilor de la Bechtel, acum un kilometru poate să coste 3,5 mil. euro, articol on-line, http:// www.zf.ro -11.04.2012.
- *** Top 3 cele mai păguboase investiții în infrastructură, http:// www.riscograma.ro – 2.04. 2012.
- *** De ce plătim dublu autostrăzile față de Bulgaria, www.romanialibera.ro – 29.07.2011.
- *** Document informativ, http:// www.scritube.com/geografie/Drumuri-rutiere-europene.

Risk and uncertainty in business

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Abstract*: This paper is an attempt to understand the business risks, their nature and their direct impact on them. But perhaps the most interesting thing is that real that risk, ignored or underestimated, can cause huge losses whatever the branch of activity. In my opinion, risk management is a blend of art and science designed to eliminate any possible losses and gains intensify. Risk is a natural and inseparable partner of any activity having direct and powerful effect on the results of that activity. Every activity has a certain degree of risk. Every day we are part of the organizational structure is addressed directly or indirectly to various risks. However we as individuals, we are subject to various risks. We live in a world of risk. These risks include goods that are available to our partners we work with, the environment in which we work. Implementing a risk management system is therefore an important objective for any organizational structure as well as for an individual. Can we counteract the negative effects of such random events occurring whether we want it or not, whether we like it or not? Probably not entirely, but certainly we can alleviate. Risks arise in all socio-economic activities, for each of them wearing particular forms depending on the type, mode of expression and size.*

Keywords: Risk, Management, Business, Uncertainty factors

JEL: G3, G32

1. INTRODUCTION

The theme of this paper in my view should materialize maturity of thought. Therefore, I believe that the work area of interest should include a subject to mirror interest and concern to know more.

Current market economy "management by ear" is not enough. It is essential to understand that to run a business, a project, a system is needed not only for flair and intuition and science. And the essence of any business is risk and risk-taking itself. Therefore, to understand the business and the processes that it entails must first quantified the potential risks it may face.

This is the reason why I chose this topic:

To better understand risk management in business, you must first see what the risk is, how it evolves and how it can be tackled. Nothing simpler, yet more complex identified a particular control. From the dawn of history, risks have been one of the biggest and most exciting challenges for the human race. Risk taking was human progress engine.

Risk is a natural and inseparable partner of any activity having direct and powerful effect

on the results of that activity. Every activity has a certain degree of risk. Every day we are part of the organizational structure is addressed directly or indirectly to various risks. However we as individuals, we are subject to various risks. Performance achievements have won great risk taking. Risk avoidance is a sure path to failure. A higher risk can bring a higher gain. Prosperous businesses are focused on earnings quality through accurate assessment of the risk-winning using information technology.

Understanding all this, we can conclude that summarizes all business risk management methods and means by which risk is managed in order to meet business objectives with uncertainty as major basic risk factors. Keyword management is systematic risk, because only a systematization extremely rigorous and constant business of all elements can lead to an efficient control over it and reduce risk factors. Address how risk is influenced by personal characteristics of risk managers.

So, the main goal of management science should be appropriate risk taking by learning and understanding of alternative risk and expectations, identifying resources and efforts for the proposed results. Systematic approach to business process can lead to the discovery of the means necessary to correct errors or inappropriate decisions.

May seem as developed risk management strategy, it is worthless unless it is based on the importance of the human factor.

In terms of risk, it is very important to address: a questioning everything objectively and identifying opportunities and challenges where the net cost and risk than reward. Risk management approach in this paper is done in a holistic manner. Managing the risk in a holistic manner is based on a complex understanding of the threats, strengths and weaknesses faced by any business.

2. THE RISK

2.1. Risk

Risk is inherent in each process or system. Whatever the mission, vision, goals, objectives, values and standards, risk and its management is inherent in achieving all of them. Risk is the essence of all things. Moreover, it is a fundamental human. You take risks whenever you venture into the unknown, where probabilities and possibilities cannot be exactly determined.

In conclusion, a definition of risk might be as follows:

"Risk is defined as an element always appears uncertain but possible events in the technical, human, social, political, reflecting variations in the distribution of possible outcomes, the probability of subjective and objective values, with possible damaging and irreversible effects".

The degree of manifestation of risk is directly related to the probability of achievement and therefore there is a risk severity classification according to their probability of achievement. In the classic sense of decision theory, risk is identified as an element always appears uncertain but possible in the social and human activities whose effects are damaging and irreversible.

A very interesting way of looking at things is the public perception of risk, perception influenced by emotions. Social perception is based on observed data and knowledge that we have

about people who belong to a group. There are four images that appear on the public perception of risk:

a) imminent danger ("Sword of Damocles")

Risk is considered a threat that can strike at any time and cause a disaster risk source is artificial. The danger lies in the unpredictability of the accident. A pertinent example would be a public perception that nuclear disasters cause at any time.

b) Risk invisible ("Pandora's Box" - Slow Killers)

Risk is an invisible threat to public health or welfare. Delayed effects occur and are not likely catastrophic. The public does not have direct access to information depends on external sources. Credibility of the source of information is crucial. The risk is minor, but tend to blame those involved is strong. An example preservatives, food additives, vegetables undergo genetic engineering etc.

c) cost - benefit ("Balance of Athens")

Public perceives risk as the difference between what wins and what loses. Risk perception is limited to earnings or financial loss. In these situations works probabilistic thinking. The classic example would be gambling.

d) voluntary risk (risk for the sake of risk - "The Myth of Hercules")

2.2. Risk - from a business perspective

From the perspective of business risk is somewhat different from the general risk study. I would say even unilaterally. A business risk is the purest essence. Business risk is inextricably linked to earn reward.

The dictionary definition of risk is "the risk is the possibility of suffering losses." Such a definition is certainly negative connotations. Such an approach to business risk would certainly have devastating effects. New approaches require treating risk in a much more positive and constructive.

A definition of risk from a business perspective dictionary gives economic terms "permanent feature of the universe in which the business evolves. All techniques management forecasting, planning and exploration concern the encirclement and minimizing the risks of uncertainty. "

It gives importance and manage risk management is a major concern. But it is neither possible nor desirable to completely eliminate risk. Most of the progresses made by mankind have been linked to risk of manifestation taste great explorers and inventors.

But risk management is needed to reduce incidents and accidents. The solution is not completely avoid risk, which is otherwise impossible, but avoiding risks that cannot be understood, controlled and monitoring, respectively, using the remaining risks to success. Performance achievements have won great risk taking. Risk avoidance is a sure path to failure. A higher risk can lead to higher gain. Valuable business focuses on quality gain by more sophisticated and accurate assessment of the relationship between risk and earnings using information technology.

From another perspective, "risk is the threat that an organization or company cannot achieve predetermined objectives." Every failure and every identifiable risk therefore is somehow "about people, their individual limit".

Any organization meets the practical and psychological risks. Disasters can happen everywhere. If you really are quite Antrim beyond our control, we cannot ignore. Otherwise, we can provide. Contingency and failure differ greatly. Failure may be a consequence of misunderstanding and incorrect handling of risk factors in a business. One can speculate much on the risks in a business regardless of its type and proportion. Important to note is that the risk in any business is due to a number of factors visible or less visible. Ways in which these factors are established risk management practices data, widely debated topic in the following chapters.

2.3. Risk factors in a business

Business risk also involves many internal factors. Therefore the most important internal factors in risk management in a business relationship are related to financial decision making, structure and processes of an organization, communication, human and material resources, consumer attention, internal-external communication, law and environment: Financial: Figure business, business annual analysis, interpretation analysis, decision-making process: Quality of decisions: how decisions, balancing good decisions with those that produce benefits and prevent or limit loss; defining decisions in terms of "loss making decisions" and "decisions that prevent achieving" relevance decisions, priority decisions, including decisions timing postponement or abandonment of them, weighing decisions;

Process and structure:

How risks are managed, as integrated risk management process, which is risk management, identify specific responsibilities of each individual

Feedback mechanism

In the 2-way communication process (employee / manager)

Material and human resources:

Who does what, who are in charge and are directly involved, the risk inherent in employment, recruitment process and approaches to motivation, procedures for dismissal, employment law, occupational safety, laws and legislation: The subjects whose laws are within the industry, particularity obedience to the laws in Romania who is responsible, who take decisions, unforeseen changes;

Consumer needs: changing standards, changing needs, changing markets, reputation, loss of customers, interacting with new areas of activity (e.g. e-commerce), the effects of competition

Environmental provisions:

Political, economic, global, industrial sector, market, community and public Communication: Definition of risk must be understood by all members of a company Risk elements are well defined mutual understanding of the parties involved, defining the message, message communication, communication media, message consumers, suppliers and shareholders.

A structured by type of risk refers to the identification of the type of risks according to their mode of production. And so we have:

Pure risks - consequences of accidental events cannot be foreseen (hurricanes, earthquakes, fires, floods, wars, terrorist attacks, etc.).
Hedge risks - which are related to decisions being taken at a companies, or investment in a project being events with a high probability of occurrence, depends to a large extent by a number of external factors influencing these processes.

Depending on the size and development risks:
Macro risks-which are the result of evolution or driving in a sense an institution or project organizational structure.
Micro risks - which are caused by factors specific to the industry of the institution, organizational structures and / or insufficient correlation between features business institution or project organizational structure and limitations of the overall project.

2.4. Risk and human factor

As well as put up a risk management strategy, it could become worthless if they do not understand the importance of capital that is the human factor.

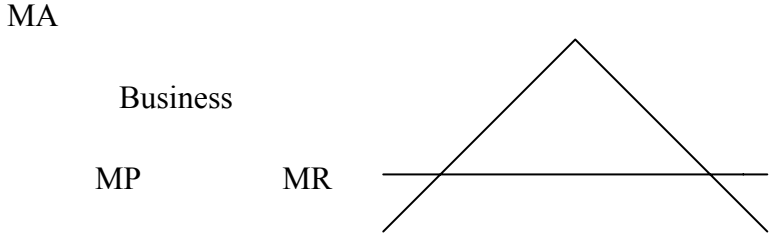
The success of a business, utmost importance has motivation and morale. Without these two, the risk will increase and will have consequences far greater than migration absenteeism or personal reasons. Sometimes organizations too little understood from this point of view, subcultures may sabotage and best management plan. Many companies have tried to establish an organizational culture desirable. There have been efforts to define the mission, vision and values of the company. This is a major risk that should not be neglected in any business.

While risk awareness should be both intuitive and conscious decisions have to be proactive, not passive or negligent. The mission begins with philosophy and organizational culture. Closely related to this is the perception of investors, customers and brand attitude, partly based on management skills, and the personal experience gained, all influenced by the ability to discover and judge risks.

In other words, the risk is fundamental planning and implementation in any organization, so it should be something inextricably business life.

Understanding and managing business risks is fundamental to make informed decisions in the context of strategic management. Understanding risk is also fundamental to differential strategy. What are the choices we make? What are the potential rewards? What are the potential risks? Informed decisions leading to objective processes, facilitating implementation, strategy development and review.

In essence, risk management is multidisciplinary. Business management is the art of successfully combining risk management and project management:



2.5. An assessment of the current situation

Management XXI century "by ear" is not enough. People have become aware of brand strength and the risk has become a key differentiator.

The biggest risk factor is actually the only man. Most managers were employed for half a century, according to the "management as a science." Some of them think but "management as art-intuition". Others go from a management tool to another, without apparent coherence, seeking a change to bring a revival of business success.

Value of management science is augmented leadership and management direction. Is to choose the best direction, or where entrepreneurship positions?

Management XXI century is centered around risk management in a holistic manner. Risk is the essence itself, and taking risks is the main function of any business. So risks are assumed not only the manager, but the entire organization.

Importance of strategic factors and business practices Some risks are not even insured even understood until it becomes vital turning into disastrous consequences for the business. However, many organizations have begun to recognize the importance of strategic factors and practices regarding business risk. Connection between risk and reward is universally valid. Not take risks, you cannot win. Often risk insurance to specialized bodies is evidence of denial of responsibility, and ultimately, a waste of money. The key to understanding risk is awareness, understanding and managing risk, so bring you gain. Focusing on strategy, risk assessment in a business can increase its potential.

XXI century key differentiators in terms of performance are:
-Quality and customer service
-Understand and manage risk
-Empowering individuals to make informed choices, aware of the possible consequences, increasing the likelihood confident business value.

3. Conclusions

Leitmotif of this research is that risks are present in any business. Trying to completely eliminate the risk of a business is a meaningless work. Risk is inherent in everything. Indeed, economic progress can be defined as the ability to take risks much higher. Trying to eliminate the risk, or to minimize, the risks resulting transformation into something irrational and unsustainable. The result can be the biggest risk of all: rigidity.

The main goal of management science translates into risk taking suitable alternative risk by learning and understanding and expectations, identifying resources and efforts for the proposed results, mobilizing energy contribution, measuring results with expectations, so finding ways to correct wrong decisions or inadequate.

On business risk sense, is this: to treat risk in a positive way or as something necessary to increase business opportunities for gain or as a series of new challenges. It is desirable that managers and employees are aware of the risks, know instinctively what reward exceeds the costs and consequences of decisions. This is the spirit of an entrepreneur.

Holistic management of choice, based on a complex understanding of the threats, strengths and weaknesses faced by any business. Risk factor begins and ends with people. People understand risk and opportunity. People make informed choices, waiting instead long-term gain to overcome the costs and risks.

Risk is inherent in business strategic plans. It is about understanding risk so that the balance between risk and reward is optimized, resulting in the increase in value, or the protection of existing values.

Universal imperative: risks must be considered to be inherent in strategic planning.

Risk affects us all equally. It is true that there are different risks and different ways of managing them. It is important to take the risk right depending on the reward.

4. REFERENCES

- Clifford M. Baumback, Englewood Cliffs, *Basic Small Business Management*, London, Prentice-Hall, 1983;
- George L., Head Malvern, *Essentials of Risk Control*, ed. IV, New York, Insurance Institute of America, 1986;
- Harris-Jones with Bergin, *The Management of Corporate Risk Act*, 1998;
- Holliwel, John, *The Financial Risk Manual. A Systematic Guide to Identify and Managing Financial Risk,* London, Pitman, 1997;
- Jeynes, Jaqueline, *10 PS of Risk Management*, USA, Butterworth-Heinemann, 2002;
- Olaru Victoria, John Bădescu, *Dictionary of the market economy*, Bucharest, Spicon, 1991;
- Terry Carroll, Webb Mark, Griffith Mark, *The Risk Factor. How to Make Risk Management Work for You in Strategic Planning and Enterprise*, England, pg 60, 2001;
- *** *Explanatory Dictionary of the Romanian Language*, ed. II, Universe Encyclopedic, Bucharest 1998.

RISKS OF ELECTRONIC TRANSACTION IN ONLINE MARKETING

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Abstract: *Reorganization of information systems to meet the challenges of developing e-commerce is the basic concern of all companies involved in the process of economic competitiveness. At the same time, they increase efforts to ensure the most competitive methods to set off the risks of electronic payments. Although it is considered that, whatever you do in this direction is still not enough, getting customers' trust is extremely difficult and expensive.*

Keywords: economics, electronic transaction, risk, counter-balance

JEL (Journal of Economic Literature) Classification: M37
http://www.aeaweb.org/journal/jel_class_system.html

1. INTRODUCTION

Implications of information technology in the new tendencies of baking activity are nowadays almost unanimously recognised within the financial and business circles in general. The e-commerce boom of the recent years and the analysts' forecasts on the growth rate of this highly dynamic field are nothing but one of the decisive factors of banking radical reorientations. Companies that want to be in the middle and not at the edge of the 21st century, reorganise their information systems to meet the new requirements to optimize their own financial operations (payments, receipts, transfers, etc.), to adjust them to those of their customers or their banks. For the individuals, the use of a card has long become a habit, the same as home banking (via computer, phone or even TV networks) tends to be widely accepted.

Adapting to these new trends is a competitive necessity and, either it is based on a strategic view or it considers in a limited manner only the automation of some current operations, has in view both the level of general labour principles (customer's profile is no longer focused on the volume of his banking account, but rather on how to make and use several accounts, depending on needs) and on the technical level: complex information systems able to meet the various requirements of the customer-seller-bank triangle.

2. PREREQUISITES OF ELECTRONIC PAYMENTS

In the middle of a general enthusiasm, justified in fact by reality, there are voices, and not few, attracting the attention on the fragility of such systems against certain types of risks, not necessarily new, but which are currently manifested in many forms. The most frequently cited concern, which is also the most analysed by the specialised literature, is the risk of fraud of transactions, especially when they carry out on the Internet.

To outline best such a system related to electronic payments (especially on the Internet), we should start from two objective prerequisites (Fota, 1987):
At least now, the new tendencies in electronic banking are focused on the payment functions and transfer of funds (electronic payment systems);
Although each type of risk must be analysed separately to know the essential features, it should not be forgotten that most of them are interrelated.

3. GENERAL RISKS OF ELECTRONIC TRANSACTIONS

Any type of risk is a potential or actual loss, regardless of its causes. It can thus be created the difference between creating a false virtual bank to attract the money of some naive customers, by speculating a still incomplete legislative framework, and the bankruptcy of a similar bank, legally created, by caused, for example by the rapid circulation of some rumours about its instability. Regardless of the context, both risks are important risks for a customer's liquid assets.

We consider it useful for the given issue, the study of the following types of risks, obtained as a result of a classification upon the criteria (Telespan, 2007):

1. Depending on the level of risk event:

- The systematic risk generally refers to the context in which electronic payments go off and it considers especially the lack of a proper legislation of the new banking area. First of all, we are referring to the activity of some entities such as the virtual banks operating exclusively through websites, which is not restricted by national borders or unique legislation. Therefore, their control is much difficult. One plausible situation would be that of a bank registered in a tax heaven, with the operational centre in the USA, supplying financial services to some European customers. These banks can not only trade in any part of the world, but are able to change their headquarters rapidly, depending on the more or less favourable legal circumstances. Consequently, the possibility that such a bank is fictitious is not negligible. Secondly, as in the case of several conventional banks, the essential asset of such a financial institution is credibility, which, however, is far more fragile here because the consumer does not perceive, with all official assurances or commitments made public, the same solid image of the bank supported by a unique authority (the central bank), but, rather the scepticism that the operations of the virtual bank might be regarded with, is sometimes greater than the justified one. The feeling is reinforced by the fact that there are a number of companies providing this kind of financial services without being classified as banks and subject to the relevant legislation. Thirdly, the consumers' rapid response to rumours or real information is favoured by high technology so that the withdrawal of significant sums as a result of a negative perception becomes a matter of seconds. Consequently, the bank's ability to balance against a potential financial crisis, caused by its own instability or by the better offers of some competitors, should also be very fast. But withdrawals of funds often have such a volume and are made with a speed that any response is tardy. Fourthly, the impeccable service of some Internet networks whose control does not belong in any circumstance to a banking entity so that any technical breakdown may bring substantial losses to the bank. The maximum connectivity of the internet can have a powerful domino effect on the banks, the instability or collapse of one of them causing a chain reaction for some similar institutions and also traders and customers. The risks listed above are part of the wide economic and legislative context in which electronic payments carry out or, in other words, they reflect the situation of the bank's external environment. There are, however, a number of risks resulted from the way banks design their electronic banking services. They are risks of their internal environment and are recovered rather indirectly from the customers, through the negative influence of the bank's profitability and stability as a whole.
- Transaction risk is manifested in at least two ways:

Technical risk understood as the possibility of inappropriate performance of data networks (especially of the Internet), although not impossible, it is increasingly reduced because of the

performances of the hardware part used to build data and communication networks.

- *Risk of fraud* or the well-known security issue of electronic payments is one of the most debated issues at the moment and the main argument against the expansion of such services. Internet fraud may occur in at least three forms:
- *Virtual fraud* in which a so-called bank hides many impostors who, under slick logo and an attractive design of the web style, is trying to fool naïve customers with an offer of apparently very advantageous services and with the initial obligation of the customer to transfer a small fee (50-100 USD) for the "performing of transactions". After some internet presence, due to difficulties in detection, the false virtual bank may disappear as if by magic, q website being difficult to be shut down, leaving serious "financial holes" behind;
- *Interception* by the so-called hackers of data on credit cards, often transmitted by careless owners as unencrypted data and their fraudulent use. The situation becomes worse when at the basis of these intrusions there are well-established criminal organisations with sophisticated interception methods of such data.
- *Electronic money* (equivalent to bits – with monetary value – of the classic cash), in some cases, by copying files with monetary value, can be used fraudulently. The principle of electronic payments aims three levels of work, also included in the SET protocol (Security Electronic Transaction developed by VISA, Eurocard/Mastercard):

Mutual authentication of the parties involved in transaction to determine the validity of each alleged quality;

Confidentiality of information in the sense that no third party will be able to intercept unauthorised transaction data;

Transaction data integrity to ensure similarity between those transmitted by one party and those received by the other party.

4. RISKS OF ELECTRONIC PAYMENTS

An improper way to manage the three mandatory security levels of every transaction may lead to risks in terms of invalidating the transaction, misuse of funds, inconsistency of amounts remitted with payment value, etc. (Bremond and Geledan, 1995):

- The risk of credit card payments through the Internet occurs if the information regarding the card is transmitted by unencrypted e-mails, being virtually accessible to anyone who can intercept the message via Internet. Therefore, Internet browsers have designed additional security levels (SSL-Netscape) so that the transfer of information from issuer to the beneficiary is encrypted. A larger project to improve security of online transaction was developed in collaboration with MasterCard and VISA.
- The risk of smart card payments is lower, both in terms of the bank and the customer. The card, equipped with a microprocessor, may be used only the lawful owner, often being programmed to block or destroy the information in case of repeated false hits. The monetary value stored on the card can not be spent twice as the chip contains special filter programs which do not allow this, each expense irreversibly reducing the balance loaded on the card.
- The risk of payments by electronic cheque is reduced because these payments use the computerised form of digitally signed cheques which are then delivered to the bank/trader who will verify the signature using a certificate issued by the specialised and recognised company. The principle of digital signature is a way to counter-balance the risk of fraud for payments on the Internet and allows transactions that generate legal obligations and can not be repudiated once they were performed.
- The risk of payments by electronic money is given by the following aspects: being

stocked on the hard disk, there is the possibility to misuse them (clearings, viruses, unintentional changes, system crash), the monetary value therefore being irreversibly lost; depending on how the system to use them is designed by the issuing bank, they are subject to the risk of double spending (expense with no coverage).

In conclusion, it can be stated that the risks arising in electronic banking activity in general, in electronic payments in particular, is very complex and it involves the compulsoriness to use a well-defined system of countermeasures.

5. SOLUTIONS AGAINST RISKS

A proposal for such a system of countermeasures implies four main attributes with a basic role in managing risks arising from the impact of information technology and the Internet from the banking activity:

- ***Integration.*** Electronic banking systems are not really profitable until their strictly technological approach is put aside in favour of an economic conception in terms of customer needs, income, expenses, results, a conception integrated in the bank's general strategy as a priority package. The attempt to supply such services that either do not replace the existing ones effectively, or are not compatible with them, often proved to be unsustainable and loss generating. Integration also means that beneficiaries (firms and individuals) of such services have to be able to use them both technically and functionally. The existing technical equipment of the companies and individuals clearly condition the utility of services and, at the same time, the data obtained from transactions should be able to be included directly into the financial management of the individual or the company.
- ***Innovation.*** Innovation in electronic banking can be applied in at least three aspects:

the introduction of additional services (electronic payment of taxes and fees) or the electronic transfer of some existing services (balance account interrogation) is to be made exclusively in accordance with the market requirements and upon efficiency criteria; the banks and other financial institutions providing such services will change their management and marketing policies, in compliance with the new information channels that a customer has and their frequency of use; the analytical and synthetic evidence of expenses with information technology should be designed so that the costs of projects can be traced on exact destinations because the latest technical equipment are vital for the efficiency of electronic banking services.

- ***Security.*** It can be operated on the following directions: standardization of technologies used, of formats of electronic messages, the creation of an authority to certify the partners who supply the necessary information technologies, collaboration with companies that can provide a real security level of the applications, the use of latest information on encryption, of information integrity verification and authentication of partners.
- ***Stimulation.*** Economic and legislative stimulation is not only necessary but it also has a long-term positive effect. Knowing that electronic banking can not work in a market where information technology is obsolete or used only isolated, taxation should be designed as to spur the manufacturers and importers of computer equipment, in the form of significant discounts or exemptions from customs duties, VAT or other tax obligations. The profitable development depends vitally on how these four categories of attributes of a system to counterbalance the risk are understood and applied, for the financial sphere and the private consumer, individual or legal entity, of some extremely advantageous services included under the generic name of electronic banking.

6. CONCLUSIONS

Today's economy and especially tomorrow's economy can no longer be conceived without electronic transactions. Therefore, there is an increased concern about ensuring against electronic payments and, more especially about gaining customers' trust in the safety of these payments. The paper provides the most accurate solutions to counter-balance electronic risks, solutions which, once applied, will provide the company that competitive advantage in addressing new markets.

7. REFERENCES

- Bremond J., Geledan A., *Dicţionar economic şi social* Editura Expert, Bucure□ti, 1995
- Fota C., *Tehnica tranzacţiilor de comerţ exterior*, Editura Scrisul românesc, Craiova, 1987;
- Tele□pan C., *Tehnica operaţiunilor de comerţ*, Editura Psihomedia,Sibiu, 2006, p. 274;
- The Economist, May 15-21, 2004, A pe rfect market, A survey of e-commerce, pag.9, pag. 1-16.
- Electronic Commerce and Development Report 2001, UNCTAD, United Nations,
- UNCTAD/SDTE/ECB/1, www.unctad.org/ecommerce. A se vedea şi versiunea raportului din 2003 (UNCTAD/SDTE/ECB/2003/1).
- Ministerul Comunicaţiilor şi Tehnologiei Informaţiilor, Statistici, www.mcti.ro.
- BCR – www.bcr.ro, Banc Post – www.bancpost.ro. A se vedea şi revista eFinance, Carduri virtuale pentru o lume virtuală, Nr.39, noiembrie 2003.
- VeriSign Inc., www.verisign.com/products/, What Every Merchant Should Know About Internet Fraud, 2003.
- Electronification of Payments in Europe, European Central Bank (ECB), Monthly Bulletin, May 2003.
- Implementing Electronic Card Payment Systems, Cristian Radu, Artech House, Computer Security Series, 2003, www.artechhouse.com.
- MCTI – www.mcti.ro, www.e-guvernare.ro, www.e-licitatie.ro

CONSIDERATIONS ON THE COMMUNICATION MANAGEMENT IN STOCK EXCHANGE ORGANISATIONS

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Abstract: *Researchers and communication specialists claim that it is impossible to find an aspect of the manager that does not involve the communication process. Management, as a field of activity, crosses many areas including social sciences, logic, philosophy, mathematics, information technology, international relations, communication, linguistics, culture. The source of most communication problems is the difference between the content of the message or the impact that the manager intends to convey and the way the other members of the organisation receive the message. One of the components of interpersonal communication is also the managerial communication. Through managerial communication as a management tool, the manager carries out his specific tasks. The communication process is in constant motion and change according to the evolution of the society and also to the interests of the organisation. Most experts in the field of management science classified the managerial communication as an element that cannot miss from the managerial process. Furthermore, it is situated on one of the highest levels, being a major and fundamental constituent. Over time, due to the technological, economic, and not only evolution, the change of management has favoured the emergence of several specific forms that managerial communication adopted for its progress. Therefore, due to the arising tasks, different in substance and form, but also because of their versatility, the managerial communication changes and tends to become and authority which is central within the organisation in particular within the whole managerial activity and beyond. Thus, the current paper aims at outlining some elements regarding the communication management within the stock exchange organisations and the evolution of this process within the organisations. It will also be shown an example of effective interpersonal communication within an institution, namely Sibiu Stock Exchange.*

Keywords: management, organizational communication, efficiency

JEL (Journal of Economic Literature) Classification: M10

1. INTRODUCTION

The management process of transformation of input elements and the management relations with the outside environment are achieved through communication. An essential part for the management is played by the reverse connection offered by the outputs, which ensure the re-vivification of the system and provides information about the necessary changes to the environmental variables, presented as opportunities and restrictions (Ursachi, 2001, p. 16). The communication process is in constant motion and change according to the evolution of the society as shown in **Figure 1**.

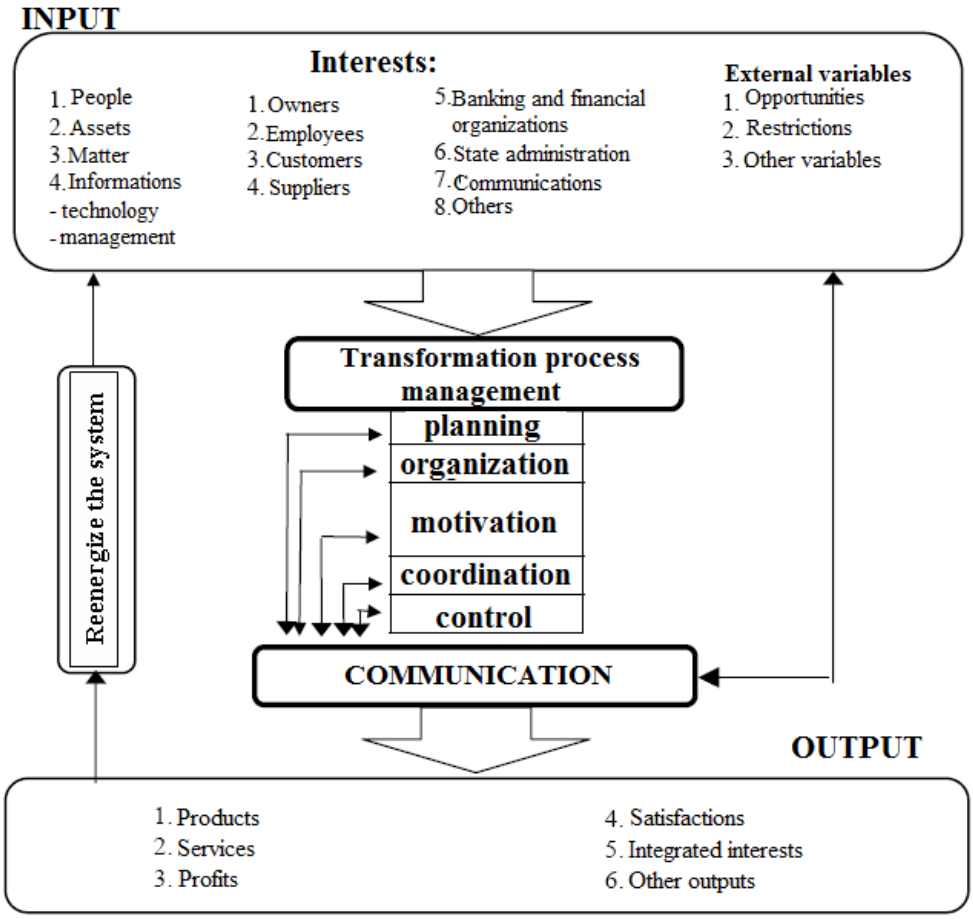

Figure 1: The system of management
Source: Ionescu, Cazan, 2005, p. 10

The techniques of communication underpins each commercial activity and thus of each human activity (Ionescu and Cazan, 2005, p. 10).

Communication has assumed great importance in the contemporary era and this will not change. Studying the communication theory, we can become more informed on the society and we can help understand certain problems we are facing or will be facing in various fields of activity (Littlejohn, 2002, p. 16).

In order to be well-prepared, the future manager needs rich knowledge that would allow him to carry out a series of functions (Cornescu et al., 2004, p. 9).

2. THE EVOLUTION OF MANAGERIAL COMMUNICATION PROCESS IN ORGANISATION

The managerial communication process is considered as decisive as the manager establishes if and what he communicates (filter), if he discloses or not information and how he uses it (storage) and how and when he uses the information stored (control).

Within the organisation, good communication abilities become necessary for the entire activity, being generally valid both for the employees and for the leaders (Bell and Dayle, 2010, p. 8).

Each manager's strategy should aim at increasing and promoting an action plan that has the continuous adjustment of how the organisational process works, according to the situations which most of the times are permanently changing. The manager's moral and professional

obligation makes him maintain a network of contacts with the partners of the organisation, to achieve the foreign policy and, at the same time, a network of important and necessary information regarding the achievement of the institution's internal policy (Niculae et al., 2006, p. 63).

Managerial communication is of great importance in the organisation. The manager, holder of good interpersonal abilities will have the ability to interact accordingly with the employees whom he is in charge of, regardless of their level. Therefore, the team spirit will prevail positively and the innovation availability (Owen et al., 1999, p. 22).

Better communication leads to greater acceptance of decisions and better understanding between speakers and a more effective way to solve the problems occurred at the institution in which they work. The communication ability should be one of the most important abilities of a manager. The manager's behaviour is also crucial to the subordinates.

Whatever the nature of the organisation or its field of activity, managerial communication conforms to certain ethical and moral rules, elements that are part of the organisational culture.

Each manager, as we mentioned earlier, but also each competent employee, regardless of the department they belong to, do not sent information and messages randomly or as they see fit, but in accordance to a predetermined strategy established in the organisation, with the role of maintaining a good relationship with it.

Group communication management has characteristic functions helping define the group, supporting the implementation process of decisions and change.

Often, top managers are deprived of real, truthful information, being most of time assaulted by reports that do not send any information. Removing such "organisational incidents" which also burden taking a decision and finding a solution to the encountered problem reveals the increasingly fierce need to show the usefulness of effective communication within an organisation.

Sometimes, it happens that the communication process take place with difficulty. The entire communication system should be designed so as to take the shape of a dynamic organisation, capable in any circumstances to meet the information needs of the employees from the system (Nistor, p. 27).

The most important goal of managerial communication in any organisation is to achieve accurate, efficient and effective information, both vertically and horizontally, aiming to best meet the internal and external requirements and accordingly to the established managerial and organisational objectives. In the managerial communication process of an organisation, a series of basic communication requirements must be met by each employee. These basic requirements come down to the need to know, the need to understand, the need to express oneself.

A manager's activities in an organisation should mostly be represented by the communication activities he undertakes. It is assumed that the share of communication within the activities one performs is reflected in the roles they fulfil.

Mintzberg believed that managers fulfil three types of roles: interpersonal, informational and decisional. The informational roles (monitor, speaker and spokesperson) are the ones that define communication, but the informational circuit may also be identified in the other roles as well (Nistor, p. 26).

The constancy of managerial goals regarding communication should adapt and improve according to the field of activity of each activity. These must be correlated to the management's functions: the planning function or the forecasting, organisation, coordination, training and evaluation-control function (Moldovan, 2003, pp. 70-72). The major prerequisite for deciphering

the decoding processes of the organisational mechanisms lead to the understanding of management functions through the communication process.

The essential component of the planning or forecasting function is communication without which this managerial process could not take place. Both internally and externally, carrying out the planning function in a company without a genuine communication support is inconceivable.

Another example could be the reference to the coordination function. In order for this managerial function to be fulfilled, and in order for it to be effective, a proper communication is required, at all levels. Sending information, understanding the whole message are basically what communication is all about. In its turn, in order for it to become efficient, communication depends on several factors, such as (Niculae et al., pp. 70-71): the quality of management becomes the responsibility of the people who are in leadership positions; the quality of those in the executive staff: the professional training, care and speed to solve problems.

The coordination function has two forms according to the criterion of how communication is achieved (Niculae et al., p. 71):

● bilateral coordination: has as starting pillar a linear communication, between manager and subordinate with the purpose of obtaining an efficient feed-back. The great consumption of time is a disadvantage;

● multilateral coordination: has as starting pillar a network communication which includes a great number of subordinates who come into contact, changing information with the manager. This type of coordination is found especially in meetings.

The training function cannot occur and cannot be achieved in the managerial process but through communication.

3. THE CHARACTERISTICS OF MANAGERIAL COMMUNICATION

The characteristics of managerial communication within an organisation are influenced, beyond the communication functions performed by each employee, by some specific functions of the managerial communication (the information function; the function of transmitting decisions; the function of influencing the receptor; image-making function; motivation function; organisational advocacy function). Managerial communication fulfils specific functions that should be private and consistently understood and interdependent (Niculae et al., 2006, p. 74).

As a significant example from internal communication, we can highlight the communication between the boss and subordinate, which is the key element in ascending or descending vertical communication in organisations. This exchange of communication should give the manager the opportunity to direct the subordinates towards the proper fulfilment of tasks, to clarify the context of rewards and provide social and emotional support. There are a number of shortcomings, communicational barriers in the communication process between boss and subordinate.

Any organisation performs the communication not only between its components or inside these components, but also between them and the external environment. The communication through which organisations, by means of communication channels, exchange messages with the external environment is called communication with the external environment or external communication (elements from the social, economic, political, cultural environment).

Interpersonal communication is also very important, just like the other types of communication presented so far, being an action that takes place between two persons.

Improving interpersonal communication involves the unconditional existence of feed-back. Starting from the premise that we do not always want to say what our words express or do not understand what we hear or read, feed-back is a crucial component of our communication effort.

It represents the information indicating if we made ourselves clear and informs us what the other person received, read and understood from our message and how efficient we have been in the role of transmitters. Regarding these statements, we may also make an exemplifying reference of the stock exchange organisation in Sibiu in terms of improving the interpersonal communication within this stock exchange institution.

For example, Sibiu Stock Exchange holds a videoconference. The transmitter (the boss, manager, in our case SIBEX president) transmits information, makes arrangements or analyses a a particular situation (the evolution of the stock exchange, future policy, approaching new measures, the emergence of new stock exchange products). On this occasion, at the end or along the process, the receivers (heads of departments – the executive director of the Romanian Clearing House – RCH, SIBEX deputy CEO, the CEO of the Board of Administration, etc.) confirm if they understood and know what they have to do in the future or, if not, they ask for additional explanations. According to the specialists' studies in the field, many managers consider that they do not need feed-back, others simply avoiding to use it. But, when no attention is given to feed-back, no reaction is generated and consequently no improvement is required in the transmitter's behaviour or in the quality of the relations between him and the receiver. Failure to use the feed-back to improve the interpersonal communication process, especially in the relationship between boss and subordinates and between experienced subordinates and the young or newly-employed ones favours the development of an anxiety-generating working climate and a defensive behaviour.

In the communication process, the manager (the boss) will have to take into account the features of the group, namely the structure, cohesion, composition, size and role. And as for the interpersonal communication and the group communication, the boss may influence the quality of the communication playing the part of initiator and coordinator of communication (transmitter), but also receiver.

A negative influence of the communication process, but this time from the perspective of the manager as receiver, may lead to submission deficiencies.

4. CONCLUSIONS

Managerial communication is more about internal communication and is closely related to the institution's economic and financial activities. This is why the studies on managerial communication remain in the interdisciplinary area or are even subordinated to the economic field (Tîrziman, 2003, pp. 43-49).

In conclusion, it can be stated that modern management grants a very important role to communication, which it considers a crucial component of the managerial system of any organisation, belonging either to the private management, or to the public management (Niculae et al., 2006, p. 63).

The communication process in stock exchange organisations has the same components as the communication process in any other organisation. Regardless, for this type of communication, there are specific features of managed field (brokers etc.).

Communication is everything to management, especially in the stock exchange field, since the understanding of problems that every employee or even manager is faced with depends on the quality of communication. It is very important that in an institution, regardless of its nature, the manager has the ability to motivate and lead his subordinates, but also know how to maintain the relationships with the organisation's external environment. These considerations are relevant for the proper functioning of the institutional activity.

Lack of communication brings harm to the institution and to the public, and consequences of the communication blockage gets alarming proportions if the institution is meant to work for the public and communicate with it (Moldovan, 2003, p. 107).

6. REFERENCES

- Bell, A.H., Smith, D.M., (2010), *Management communication*, John Wiley&Sons Inc., Third Edition, United States of America, p.8;
- Cornescu, V., Marinescu, P., Cazan, E., (2004), *Management, de la teorie la practică,* Editura Universității din Bucureşti, Bucureşti, p. 9;
- Ionescu, Gh.Gh., Cazan, E., (2005), Editura Universității din Timişoara, p. 10;
- Moldovan, I., (2003), *Comunicare și relații publice*, Note de curs, Vol. I, Editura Alma Mater, Sibiu, pp. 70-72;
- Niculae, T., Gherghiță, I., Gherghiță, D., (2006), *Comunicarea organizațională și managementul situațiilor de criză*, Editura Ministerului Administrației şi Internelor, Bucureşti, p. 63;
- Nistor, C., *Curs de Comunicare și negociere în afaceri*, Cap. IV "Comunicare şi conducere", Universitatea "Dunărea de Jos", Galați, p. 27;
- Owen, H., Dickson, D., Tourish, D., (1999), *Communication in management*, Gower House, Anglia, p. 22;
- Stephen, Littlejohn, W., (2002), *Theories of human communication*, Editura Thomson Learning, Anglia, Edi□ia a VII-a, p. 16;
- Tîrziman, E., *Ştiințele informării și comunicării, domeniu de cercetare* în Studii de Biblioteconomie şi Ştiința Informării/Library and Information Science Research, Nr. 7/2003, pp. 43-49;
- Ursachi, I., (2001), *Management*, Editura ASE, Bucureşti, p. 16.

ECONOMIC RATE OF RETURN. APPROACHES AND INTERPRETATIONS

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Abstract: *Calculated as a ratio between the economic and financial results and the efforts made to obtain them, the economic rates of return measure the efficiency of material and financial resources allocated to the enterprise's activity. This article shows different forms and meanings for the economic rates of return, depending on the type of financial result and on the effort elements used to compute the rate, pointing different aspects of economic performance, taking or not into consideration fiscal aspects, amortization and significant accounting policies.*

Keywords: no, more, than, 5, keywords

JEL (Journal of Economic Literature) Classification:
G39 Corporate Finance and Governance

1. INTRODUCTION

The analysis of a company's profitability based on the rates of return brings an over plus of utility to the consumers of financial information, giving the possibility to make comparisons over time and space, as well as comparisons to the internal and external reference rates.

The analysis based on financial rates consists of the analysis of the relationships between the elements of a company's financial statements, especially between the elements of the financial balance sheet and those of the profit and loss account (Anghel et.al 2010), and, depending on the company's type and features, it refers to its reprocessing and auditing and also to specific information, obtained from the capital market (Stancu 1997).

2. RATES OF RETURN

Generally, the rates of return are calculated as the ratio between the economic and financial results and the efforts made to obtain them (Vintilă 1997).

The rate of return characterises the profitability level, enabling comparisons over time, space or standard values accepted or issued by specialised bodies, i.e. it allows the comparison between entities that have had the same results, but with different efforts.

2.1. Economic rate of return

Economic rates of return measure the efficiency of material and financial resources allocated to the enterprise's activity, having a relation of inclusion between the rates of return and the margin rates (Stancu 1997). These rates analyse the profit as a percentage of the income, capitals or assets employed (Anghel 2010), showing the contribution of patrimonial items in obtaining the final results of the entity.

In the specialised literature, there is a great variety of models regarding the way the economic rate of return is built, and therefore, as many meanings and interpretations for it.

One calculation model suggests the construction of the economic rate of return as a measure of the company's total asset performance, starting from the economic result (RBE; RE) and all the means used (Total asset or asset from operations) (Nicolescu 2005):

$$R_{ec} = \frac{RBE}{A_t} \times 100 \text{ or } R_{ec} = \frac{RE}{A_t} \times 100 \text{ or } R_{ec} = \frac{RE}{A_{expl}} \times 100$$

Where:
RBE-Gross operating result
RE- Operating result
R_e- Performance of the financial year
A_t- Total asset
A_{expl}-Operating assets

Calculated according to the model using the gross operating result, the Economic rate of return is independent of the funding mechanism, the fiscal pressure and the extraordinary flows.

In a similar context, Prof. Vasile Robu shows three calculation models:

$$Rec = \frac{RE}{Ae} \times 100$$
RE- operating result
Ae-operating assets

$$Rec = \frac{EBE}{At} \times 100$$
EBE- gross operating surplus
At-total assets

$$Rec = \frac{Gross\ Profit}{At} \times 100$$
At-total assets

Using the operating result leads to the determination of an economic rate of return independent of the funding policy, fiscal policies and extraordinary flows, while the use of gross operating surplus gives an economic rate of return independent also of the technical capital depreciation policy in addition to the elements mentioned in the previous model. A similar model is presented by Gh.D. Bistriceanu, but reporting of the gross operating surplus is done by comparing it to the ***gross economic asset***, obtained by summing the items of fixed assets which are not influenced by depreciations, to the necessary working capital, the obtained rate of return being a gross economic rate of return, used for intersectoriale comparisons, in the external analyses of the operating performances.

Using the gross profit may lead to getting a higher rate of return. This is no longer independent of the financial and extraordinary activity, and if these activities bring profit, a higher rate of return is preferred by managers who are paid according to performance.

The economic rate of return is presented as an intrinsic rate of return of invested capitals, independent of the funding policy, expressing the ability of the invested economic asset (Fixed assets + net current assets, respectively equity + debts) to make overall profit, net of tax, which the self-financing of the company's net growth and the pay of capital suppliers is provided from (Stancu 2007).

The calculation of the economic rate of return is done according to the model:

$$Rec = \frac{EBIT(1-\tau)}{Ae}$$

Where
EBIT – earnings before interest and tax
τ – corporate tax rate
EBIT(1- τ) – overall profit, net of tax

Using the global profit EBIT(1- τ)= PN+Dob(1- τ) makes it that the fiscal savings, owed to interest deductibility from the taxable profits is not taken into account in determining the employed outcome indicator. Therefore, this type of calculation of the economic rate of return shows the technical-economic ability of the company, independent of the funding policy and the companies' comparison in terms of profitability should be made in this regard (technical-economic).

Another approach suggested by D. Bistriceanu, based on the general pattern of the relation between operating surplus and economic asset it takes into account the gross or net values of the elements upon which the analysis is made.

The calculation models presented are:

$$\text{Gross Economic Rate of Return} = \frac{EBE}{Aeb} \times 100;$$

$$\text{Net Economic Rate of Return} = \frac{ENE}{Aen} \times 100$$

Where:

EBE – gross operating surplus, the difference between revenue and expenses, less the depreciation

ENE – net operating surplus, calculated by subtracting the reduction from the gross operating surplus

A_{eb} – gross economic asset

A_{en} – net economic asset, calculated by subtracting the reduction from the gross economic asset

A comprehensive approach of the economic rate of return is given by Monica Petcu, her view of analysing the two categories of assets in which the invested capital of a company is materialised being: industrial and commercial assets, or financial assets. In the calculation of economic rate of return of the operating assets, M. Petcu suggests the use of operating income (EBE), and of the profit before interest and taxes (EBIT), which ensures the independence of the indicator from the financial policy and fiscal pressure.

The assessment of the financial assets' rate should be done by taking into account the financial incomes plus the value within the evaluations at the market value for the financial fixed assets and short-term financial investments; incomes and expenses generated by operations outside exploitation; impairment for the securities' portfolio, the fixed assets outside exploitation. The calculation of the financial assets' rate is done by comparing the result of the financial asset to the value of the financial asset.

In calculating the rate of return of operating assets, the following elements should be taken into account (Petcu 2009): For a thorough assessment of the rate of return of operating assets, the assets that are not actually used in the production process should be eliminated from the fixed assets: tangible assets in conservation, repair, objectless, formation expenses, assets in investments. The use of fixed assets at the accounting net value is affected by the practices adopted by each company, by the fiscal rules and depreciation methods, which distort the economic reality. Consequently, the use of gross, corrected value of the assets is more relevant when it is imposed by the comparison process, with the adjustment for depreciations. Taking into account, when calculating the real economic rate of return, the gross value of the assets not mentioned in the balance sheet items (lease, rental) that are used in the production process. The estimation of the necessary working capital should take into account the variation of its components, according to the calculation model. The necessary working capital depends on the level of the activity, which gives a certain size to the stocks of raw materials and finished products, to customer loans and provider loans, on the behaviour regarding storage, transposed in the variation of the speed of turnover, on the contractual relationships and negotiations with customers and suppliers. The economic rate of return of operating assets should be correlated to the related risk. Since the exploitation risk depends on the structure of expenditure, it is higher for a company with high capital and significant fixed expenses. Moreover, the risk of insolvency increases if a company has an increased level of investments in the necessary working capital.

The specialised literature also offers other methods to calculate the economic rate of return, depending whether the gross or net profit is taken into account as an element of the result,

respectively whether the effort or expense of the production process is used as a basis for reporting an element. The problem of using the total assets or the invested capital in calculating the economic rate of return is quite controversial in the specialised literature, the invested capital also including the gross value of fixed assets, the necessary working capital and the company's liquid assets (Balteş 2010).

In international practice, the economic rate of return is calculated as the ratio between Earning before Interests and Taxes and Total Assets, this method being first useful to the suppliers of capital, creditors being the most interested in the company's profitability before reducing the interest.

Halpern uses as calculation model of the economic rate of return the following formula

$$\text{ROA}=\frac{Net\ result\ (after\ \ taxes)}{Total\ assets}$$

Stating, however, that, due to the assets' financing both by the shareholders and by the creditors, the use of counting net profit is considered appropriate, amounted with the interest, the profitability supposing to be showing the amount of earnings for both categories of investors.
In analysing the economic rate of return, the financial practice uses the explanatory decomposition rates, which shows the impact of several factors on the economic profitability.

CONCLUSIONS

When appreciating financial performance, the Economic Rate of Return is one of most used and meaningful indicators. The method of calculation is chosen by the analyst, depending on what he wants to emphasize and, eventually, on the interest the intersts of providers and consumers of financial information.

6. REFERENCES

Anghel Ion (coordonator) - *Evaluarea întreprinderii*, Ed. Economică, Bucuresti, 2010, p. 132-133

Baltes, Nicolae (coord.), *Analiză si diagnostic financiar*, Editura Universită□ii "Lucian Blaga", Sibiu, 2010 p. 43

Bistriceanu Gh.D, Adoichiței Mihai, Negrea Emil, *Finațele agenților economici*, Ed. Economică, Bucureşti, 2001, p. 235

Niculescu Maria – *Diagnostic global strategic. Vol II. Diagnostic financiar*, Ed. Economică, Bucuresti, 2005 p. 220

Petcu Monica - Analiza economico - financiară a intreprinderii. Probleme, abordări, metode, aplica□ii, Edi□ia a doua,Editura Economică, 2009, p. 379-387

Petrescu, Silvia – Analiză si diagnostic financiar-contabil: ghid teoretico-aplicativ, Ed. CECCAR, Bucuresti, 2008, p.238

Stancu Ion – Finan□e. Piețe financiare şi gestiunea portofoliului. Investiții directe şi finanțarealor. Analiza □i gestiunea financiară financiară a întreprinderii. Ediția a patra, Ed. Economică, Bucure□ti, 2007, p. 759

Vâlceanu Gheorghe, Robu Vasile, Georgescu Nicolae, *Analiză economico-financiară*, Ediția a doua, Ed. Economică, 2005, p. 277

Vintilă G. – *Gestiunea financiară a întreprinderii,* Ed. Didactică si Pedagogică, Bucuresti, 1997, p. 188

MANUALUL OCDE ŞI ECONOMIA NEOBSERVATĂ

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Keywords: *unobserved economy, underground economy, hidden economy, Manual on the measurement of unobserved economy*

Abstract

OECD Manual and unobserved economy

Purely eclectic view of the nature of the activities that make up the economy were produced as many definitions , many authors have been interested in the topic. For all studies on this topic to rest on the same basis , a team of statisticians coordinated by the OECD statistical services directors, IMF, ILO and Interstate Statistical Committee of the IEC published in 2003 „Handbook on measuring the unobserved economy whose object is to establish a common terminology and to provide a solid measure of economic production".

This guide coding vocabulary in the underground economy, defining four concepts subsequently adopted by most researchers : underground production, illegal production, informal sector production, household production for own consumption.

Conceptul „economie neobservată" se referă la activităţile economice care ar trebui integrate în Produsul Intern Brut (P.I.B.) dar care, dintr-o raţiune sau alta, nu sunt acoperite de anchetele statistice sau datele administrative de la care sunt stabilite conturile naţionale[1].

Care este raţiunea unei asemenea omisiuni? Cea dintâi rezidă, firesc, în *caracterul clandestin* pe care îl poate lua aceste activităţi, prin voinţa de a se sustrage plăţii impozitelor sau obligaţiilor sociale sau de a evita costurile impuse de lege în privinţa securităţii condiţiilor de muncă sau a protecţiei drepturilor consumatorilor. Acestea sunt ideile pe care le susţine orice persoană care evocă economia „subterană" sau „ascunsă". De multe ori aceste tranzacţii nu sunt decât parţial disimulate, iar agenţii economici le pot aduce la cunoştinţa administraţiei fiscal sau a Direcţiilor de statistică, diminuând adevărata valoare, prin modul de reducere a impozitării, decât să accepte sustragaerea totală de plata acestora. În alte cazuri, nu există nicio urmă a unei tranzacţii, ceea ce lasă loc, în general, unei reglementări special. Cea mai mare

[1] Derek Blades et David Roberts, *Mesurer l'économie non observe. La mesure d'un phénomène non mesurable: l'économie souterraine: Une typologie des éléments de l'économie non observée Les différentes approches de mesure. Une comparaison internationale des causes et des résultats*, în „Cahiers Statistiques", O.C.D.E., Ianuarie 2003, nr. 5, p. 4.

parte a tranzacţiilor clandestine corespund producţiei sau schimbului de bunuri şi servicii care sunt total legale în sine, dar evident, tranzacţiile ce poartă asupra bunurilor şi serviciilor sunt contrare legii (de exemplu, prostituţia şi drogurile) şi se desfăşoară în secret.

În al doilea rând, ne referim la faptul că între activităţile subterane aşa-zis „legale", *unele forme de activităţi ilegale constituie* cea de-a doua componentă a economiei neobservate.

Cea de-a treia componentă rezidă în *producţia de bunuri pe cont propriu*. Aceste activităţi sunt în general legale, iar producătorii nu au niciun motiv să le ascundă. Ele pot fi omise însă din evidenţa naţională, pentru simplul fapt că tranzacţia observabilă are loc între un vânzător şi un comparator care sun tuna şi aceeaşi persoană. În ţările OCDE construcţia şi întreţinerea locuinţelor reprezintă, fără îndoială, cea mai importantă formă de producţie pe cont propriu. În ţările în tranziţie şi în curs de dezvoltare culturile alimentare constituie, de asemenea, o activitate deloc de neglijat. După prăbuşirea comunismului, la începutul anilor 90, producţia agricolă la scară mică a devenit o strategie de supravieţuire esenţială în cea mai mare parte a ţărilor în tranziţie şi aceasta a putut reprezenta în unele ţări până la jumătate din producţia agricolă totală.

Cea de-a patra componentă a economiei neobservate este calificată deseori ca „producţie subterană" din raţiuni statistice[2]. Anchetele statistice şi evidenţele administrative care furnizează datele de bază necesare stabilirii conturilor naţionale sunt incomplete. Aceste omisiuni sunt uneori deliberate: din raţiuni material, poate fi dificil să fie luaţi în evidenţă într-un studiu toţi producătorii, chiar dacă numai unul singur este definit, pentru a exclude cele mai mici întreprinderi. În alte situaţii, problema este legată de carenţele metodelor statistice utilizate: registrul de afaceri utilizat în anchetă este prea vechi sau incomplete; chestionarele nu sunt retrimise sau nu sunt completate decât parţial; activităţile informale, precum vânzarea ambulantă, pot să nu figureze în nicio anchetă; sunt folosite metodele inadecvate pentru a complete absenţa răspunsurilor.

Ţinând cont de natura eminamente eclectică a activităţilor care alcătuiesc economia subterană, s-au elaborat tot atâtea definiţii, câţi autori au fost interesaţi de subiect. Pentru ca toate studiile consacrate acestui subiect să se sprijină pe aceleaşi baze, o echipă de statisticieni coordonaţi de către directorii serviciilor statistice ai OCDE, ai FMI, OIM şi Comitetului interstatal pentru statistică al CEI a publicat în 2003 „Manualul cu privire la măsurarea economiei neobservate, al cărui obiect este stabilirea unei terminologii comune şi de a conferi o bază solidă măsurării producţiei economice"[3]. În alţi termeni, acest manual codifică vocabularul în materie de economie subterană, definind patru concepte adoptate ulterior de majoritatea cercetătorilor: producţie subterană; producţie ilegală; producţia sectorului informal;

[2] Derek Blades et David Roberts, *op. cit.*, Ianuarie 2003, nr. 5, p. 4.
[3] O.C.D.E., *Manuel sur la mesure de l'économie non observée*, O.C.D.E., Paris, 2003; *Perspectives de l'emploi de l'O.C.D.E.*, ibidem, 2004.

producția de uz casnic pentru consumul propriu[4].

Obiectivul esențial al acestui *Manual* constă în a defini şi a face cunoscute bunele practice folosite pentru măsurarea economiei neobservate, conform unor termini compatibili cu normele internaționale şi, în particular, cu sistemul contabil național proprii fiecărei țări. Între altele, aceste *Manual* indică modul în care pot fi făcute estimări independente ale sectorului informal, al producției subterane, al producției casnice pentru consumul propriu şi alte unor activități ilegale. Această lucrare se adresează producătorilor şi utilizatorilor de statistici macroeconomice.

Manualul expune diferite tehnici care permit corectarea PIB, pentru a lua mai bine în evidență economia neobservată. Deşi sunt utile, aceste tehnici nu reprezintă decât soluții pe termen scurt, astfel că Manualul se înscrie în special într-o perspectivă pe termen lung. El prezintă o strategie de măsurare a economiei neobservate în cinci etape, a căror finalitate este îmbunătățirea surselor de date de bază, în scopul ca anchetele şi evidențele administrative să acopere întreg evantaiul activităților economice cuprinse în domeniul producției. Pe scurt, aceste cinci etape sunt:

1. *Identificarea unui cadru conceptual şi a unei grile de analiză convenabile,* pentru a servi ca suport evaluării economiei neobservate;

2. *Evaluarea datelor de bază furnizate contabilității naționale şi metodele de stabilire a conturilor folosite*, ca şi ca amploarea activităților neobservate şi nemăsurate şi definirea priorităților pe termen imediat şi pe termen lung;

3. *Identificarea şi îmbunătățirea vizibilă a procesului de stabilire a conturilor naționale*, care vor limita impactul activităților nemăsurate. Acest proces se va sprijini frecvent pe estimări mari, pentru a putea determina cu aproximație ordinea mărimii activităților lipsă, dar va face posibil şi exploatarea rezultatelor anchetelor suplimentare *ad hoc*;

4. *Identificarea şi îmbunătățirea vizibilă pentru infrastructură şi conținutul dispozitivului de colectare a datelor de bază*, care vor limita impactul activităților neobservate, punând dispozitivul în conformitate cu normele şi bunele practice internaționale;

5. Punerea la punct a unui plan de aplicare, care să prevadă consultarea utilizatorilor, clasificarea în ordine apriorităților a îmbunătățirilor posibile, asigurarea unei bune comunicări între anchetatori şi contabilii naționali, şi de a lucra pentru revizuirea estimărilor conturilor naționale, de unde pot rezulta modificările aduse.

Manualul conține sfaturi practice pentru fiecare din aceste etape şi subliniază că strategia aplicată pentru a îmbunătăți măsurarea economiei neobservate va trebui să facă parte integrantă permanent dintr-un mai vast program de reforme.

[4] Philippe Barthélemy, *Économie souterraine et structures industrielles dans les pays de la Communauté européenne*, în *loc. cit.*, p. 69.

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