The Scarcity of Explicative Models

"For the most part of his existence on Earth,
man did not live a better life on two legs than he did on four."
Todd G. Buchholz

With this crisis, reality has put any economic theory in difficulty. The babbling amongst strategists and theorists is the disgusting expression of the failure of policies and of the theories they inspire. What seemed as a measure coming out of the rational understanding of the collapse was too quickly and too disappointingly proven to be a desperate improvisation meant to cover up ignorance.

The theory has proven its inconsistency in such a categorical way that Economics' status as a science was being put in doubt. From fiscal and monetary stimulus measures of Keynesian origin to the crisis-solving programs stuffed with neo-monetary ideas, failure has stubbornly persisted. One after the other there was excited belief in the magic of the letters V, U, L, M, W, obviously the alphabet leaving the imagination to work without touching reality. The explicative power of theorists was shattered with every day in which the crisis followed its mysterious path, as if it had the mission to contradict the assertions of some celebrity.

Whence this shameful cavalcade of theoretical illusions sold to economic policies? The already tried answers in the theoretical Babylon of the crisis are inconclusive. Even more, some explanations are downright false. The recourse to the eschatology of ideologies is part of this last category. Proclaiming the end of some models in the manner of the ironic expression "The king is dead! Long live the king!" is the most performed play.

The superficiality of feelings betrays a deficit of reason. The analytical attempts revolve around the empty idea that something seems to be dying and something else could possibly appear. In this construction, which haunts the thinking around the crisis, there is an obvious epistemic error because it exceeds the method of scientific knowledge. Ideological propensity has, in this crisis, an open field in which to roam together with the will for revenge – which is possible to realize now without too big of a cost. As with any crisis of proportion, this one too erodes the political systems no matter how solid they may be.

The assumption founds a different way of thinking than that of a science. Unfortunately, this type of thinking still controls significant areas at the level of economic decision-making. The transfer of explicative rules from the perception of beliefs to the validation of certainties and from the fluidity of presumptions to the rigor of the truth spoils the status of economic science. The expectations turn the possible to absolute. Utopia is revisited. One built both on the moving sand of morbid nostalgias as well as on the malign pleasure for living cadavers. A new aimless path is reinvented, while economic theory, attempting to rehabilitate itself, will assure us it is the optimal one.

The height of the irrational in the positions inside the interregnum of the crisis is realized by those who believe that the only solution for coming out of the crisis is waiting for it to pass. The crisis is, for many, like a flu epidemic which arrives unannounced and passes – as jokers say – in seven days without treatment and in a week with treatment. Resemblance, Identity, Equality mark the spirit of these self-sufficient movements.

The ridiculous came to be the performance standard for those theories which experience nausea when met with interventionist measures or those which throw the towel when faced with the options of "laissez faire, laissez passer, le mode va de lui même". These centrifugal alignments show the same consistency anywhere and anyhow and, especially, are not interested in man. They have a favorite target placed at the heart of opposing ideologies. The failure of anti-crisis policies is a given of ideologies treated as recipes for decision and action. Even if they do it in a longer or shorter time, ideologies invariably fail. Messianic expectation have, therefore, a basis.

Does this crisis really radically change anything? The general feeling is that nothing will bear resemblance to that which was before the crisis. Change is a consequence of this crisis too, though it's more likely a correction of a course, an adjustment of mechanisms predisposed to functioning on the turbo system.

The truth brought by the crisis is shown as the expression of not only a movement of balance, from one behavioral limit to its opposite, but also of an attenuation of the trends of localizing performance in the extremes of ideas and pragmatism.

The crisis is the correction formula for the excesses represented by the typologies of opposing ideologies.

Somewhat unexpectedly, mankind overcomes its impotence, proven for two decades, of coming out of the horizon of post-communism which confuses the sense of post-capitalism.

Marin Dinu

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Deficiencies of the Public Pension System in Romania. Some Reform Measures Derived from the EU Experience

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Abstract. *The European Union is currently confronted with major economic and demographic changes that are challenging its ability to maintain strong social cohesion. Some possible solutions can be considered, such as increasing the employment for older workers and for women. In a comparative analysis for ten European countries, Romania has the lowest life expectancy, of 72.2 years, and the largest difference between life expectancy and standard retirement age, of 9.7 years. The private administrated pension funds can be a solution for labour market crisis from Romania; so recently there were adopted and implemented the regulations for this field.*

Keywords: public pension; demographic changes; old dependency ratio; multi-pillar pension system; European Union.

JEL Codes: G23, J26.
REL Codes: 13C, 13K.

1. Introduction

According to 47[2] article from the Romanian Constitution, *all the citizens have the right for public pension, parental leaves, medical care in public units, unemployment benefits and other forms of social insurance, according to the specific laws*. In our opinion, the public pension represents a mechanism to reduce the uncertainty for person incapable to work. In Romania, the percent of public expenditures for public pensions and other social insurance benefits in GDP has increased to 7.3%, in 2008, the highest level after 1990, according to data provided by the National House of Pensions and other Social Insurance.

The basic principle for public pension is the solidarity between young generations, who works, financing the system and the older generation – who benefits for the social support according to the Law no. 19/2000. Unlike this mechanism, the basic principle for private pension is that the insured person will contribute during his active life in order to obtain his own pension. Considering the methods of long term savings and investment, the private administrated pension funds will have a significant influence of the contributor and of the entire Romanian economy, due to the following arguments:

- develops work place in this "industry";
- stabilizes (1) the capital market through their investments, unlike other types of participants, focused on speculative ones;
- through their funds, provides the necessary sum of money to finance the national economy.

According to Anghelache (2004, p. 20), the institutions which administrated the pension funds are legally considered institutional investors, realising significant transaction on the capital market.

The public pension reform takes into consideration, for the year 2009, the recalculation for special pensions (2), obtained by the diplomats, members of the Parliament, magistrates, the army personnel, the police officers, secret services, etc., according to the equality principle, set up on their annual score, on the same mechanisms which has already applied for the other categories of retired persons. For the police and army personnel, the current mechanism to calculate the pension is as a percentage varying between 60% and 64% (depending on the work conditions) to average monthly gross incomes from the last six month; and the standard age for retirement is 55 years. The average standard age for retirement for other social insured person from National Social Insurance Budget is around 62.5 years. Another advantage of this special professional category is the level of the individual percent of social contribution, of 5%, lower than standard level of 10.5%.

2. Social benefits from the Romanian public pension system

In Romania, the public pension system is represented by the social insurance, based on principles like protection and social security, for the active persons and for their family members. This system has as principal objective to develop and to assign

the public funds for the active persons with partial or total loss of their work capacity or for those who has gone beyond an age limit.

Beside those pensions, the public authorities give to the Romanian social insured persons other benefits, such as:

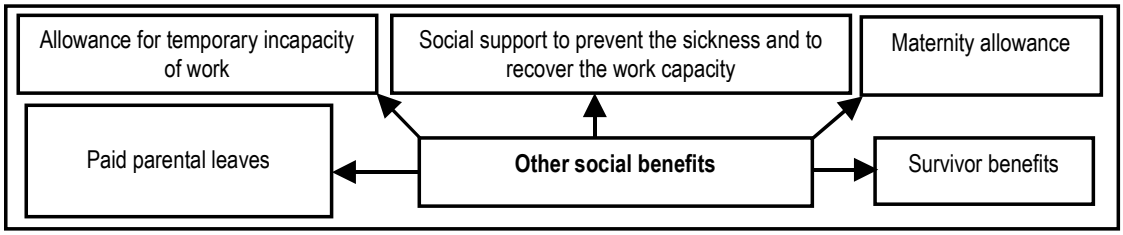

Figure1. *Other social benefits, according to the Romanian pension regulations*

Source: Own processing based on the regulations from Law no. 19/2000 for public pensions and other social benefits.

The Romanian public pension system can offer to the social contributors and their survivors, according to the law stipulations, one of the following types of pension:

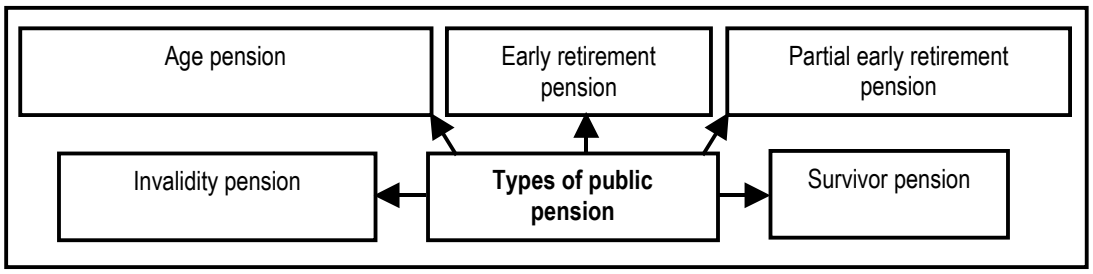

Figure 2. *Types of public pensions in Romania*

Source: Own processing based on the regulations from Law no. 19/2000 for public pensions and other social benefits (art.41-75).

1. Age pension. It is available for those social contributors who cumulative fulfilled, at the age of retirement, the standard age for retirement[3] (60 years for women and 65 years for men) and the minimum value of the contribution period (15 years both for women and men). The complete contribution period is higher for men: 35 years, compared with women: 30 years. Thus, the only principle which respects the equality principle is referring to minimum contribution period. From the total number of public pensioners at the end of 2008, those pensioners with age pension with complete contribution period represent 40.8% and those with age pension and incomplete contribution period represent 28.4%. We appreciated that the reduced proportion of the first category of age pensioners, compared with higher percentage of other types of pensioners, represents one of the most important explanation for the low amount of public pension.

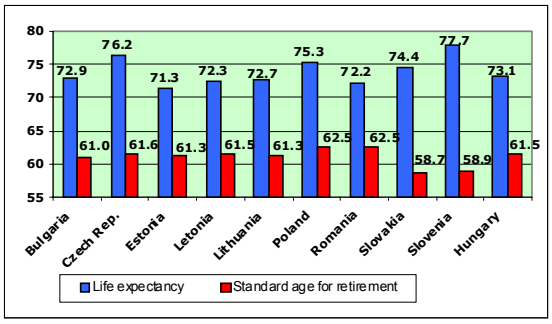

Figure 3. *Life expectancy versus standard age for retirement*

Source: Own processing based on data from Private Pension System Supervisory and from United Nations Development Programme.

For those countries with different level of standard age for retirement by gender, we realised an average between the two retirement age, in order to compare 10 European countries (Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia, Slovenia and Hungary). The life expectancies for those citizens have major differences, the minimum value being of 72.2 years for Romania and the maximum one, of 77.7 years, for Slovenia. By the contrary, in Romania and Poland we have the highest standard age for retirement: 62.5, with the lowest value in Slovenia, about 58.7 years. The major difference between life expectancy and standard age for retirement, for those ten countries are in Slovenia (18.8 years) and the lowest difference is in Romania (9.7 years). Concluding, if all the insured persons from the public pension system from Romania will retire at the standard age, they will benefit for public pension for the lowest period of time, compared with the 9 European countries. A significant part of those insured persons will apply for other social benefits to retire sooner.

2. Early retirement pension is offered to the insured that have exceeded their full contribution periods by at least 10 years thus being allowed to pension maximum five years before they reach the standard pension age. When the anticipated pensioner will fulfil the legal condition for the age pension, the pension level will be recalculated, taking into consideration the assimilable periods and the contribution period from the anticipated periods. We appreciate as restrictive the conditions for early retirement pension.

At the end of 2008, the percentage of persons with early retirement pension was around 0.2% from the total number of public pensioners and this percent are decreasing because, at this moment, the insured persons cannot fulfil the cumulative legal conditions.

3. Partial early retirement pension can be taken by the insured that have completed the full contribution periods, and those who have exceeded the full contribution period by up to 10 years may claim the partial anticipated pension with a standard pension age reduction by maximum five years. At the end of 2008, the percentage of persons with partial early retirement pension was around 2% from the total number of public pensioners and this percent are increasing, especially in the actual context of economic crisis.

4. Invalidity pension. Invalidity pension shall be entitled to the insured who have lost, totally or at least half of their work-capacity, due to: (i) occupational accidents, according to the law; (ii) occupational diseases and tuberculosis; (iii) ordinary diseases and accidents which are not related to work. Depending on the requirements of the job and degree of work-capacity loss, there are three degrees of loss of the work-capacity.

The insured that has lost work-capacity due to ordinary diseases or accidents which are not related to work shall benefit from disability pension if they complete the required contribution period with respect to age.

At the end of 2008, the percentage of persons with invalidity pension for the first degree was around 0.8%, those with the second degree of invalidity pension around 10.1% and those with the third degree around 5.6% from the total number of public pensioners.

Tănăsescu, Șerbănescu, Ionescu, Popa and Novac (2007, p. 96) considered that *the number of pensioners increased fourth times in 15 years (…), the invalidity pension being one of the most used alternative to unemployment.* In this context, the public authorities pursue to reduce the number of beneficiaries of invalidity pension, especially due to the fact that the majority are persons able to work.

5. Survivor pension. Beneficiary may receive a pension along with income from a professional activity, if the gross monthly income is not higher than one quarter of the average gross wage. The children and the surviving spouse shall be entitled to a survivors' pension, if the deceased was a pensioner, or he satisfied the terms for obtaining a pension. The level of this type of pension will be established as a percentage to average annual score realized by the deceased, differentiate function of the number of survivor persons, as it follows:

a) for one survivor - 50%;

b) for two survivors - 75%;

c) for three and more survivors - 100%.

At the end of 2008, the percentage of persons with survivor pensions was around 12.1% from the total number of public pensioners.

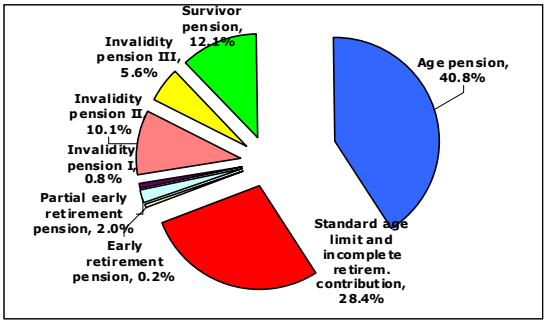

Figure 4. *The percentage of each type of public pensions, at the end of 2008, in Romania*

Source: Own processing based on data from the Ministry of Labor, Family and Social Protection.

Thus, at the end of 2008, less than a half from the total number of retired persons, cumulative, fulfilled the two legal conditions for a public pension: the standard age limit and the contribution period.

3. Statistics regarding the Romanian public pensions system

The great proportion of people retired in a different way than carrying out the age limit and the complete length of service constitute a weakness for the Romanian public pensions system.

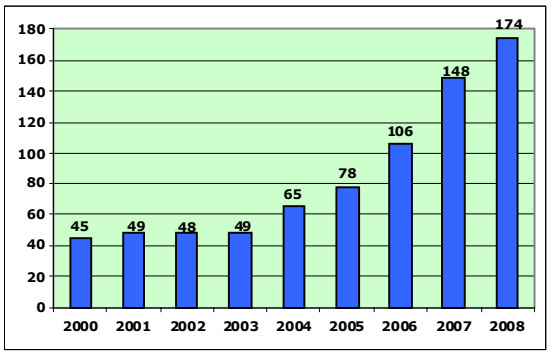

Figure 5. *The evolution of the average net public pension in Romania in Euro*

Source: Own processing based on data from the National House of Pensions and other Social Insurance.

It can be observed that the average monthly level for public pension had an ascending trend, starting from a minimum value of 45 Euro in 2000 and reaching to 174 Euro at the end of 2008, thus an increase of 287%. This increasing trend has multiple reasons:

- retirement point value increase[4] starting from 159.7 Ron in 2001, reaching to 697.5 Ron in 2008;
- the enlargement of the social insurance contributions collecting base[5] – due to: (i) the continuous changes in the fiscal regulations; (ii) the economic growth, which had induced the increase in the number of tax contributors and in their gross incomes;
- the decrease percent of the social insurance contributions[6] from 35% in 2001, to 27.5% in 2008, which has been compensated through a better collection due to the switch of this duty from the specific ministry to the National Agency of Fiscal Administration.

The pension conversion in a widely used and reserve international currency will diminish the negative influence, which had the price increase on the real pension value.

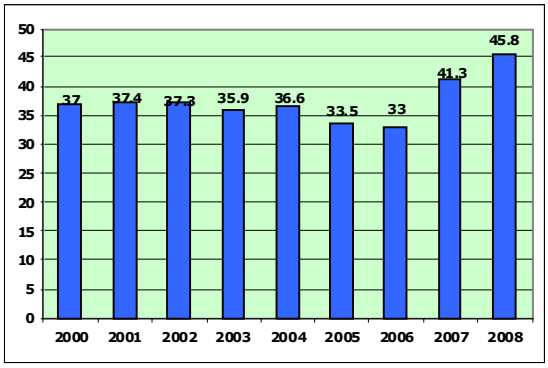

Figure 6. *Net public pension as a percentage of net average income (%) in Romania*

Source: Own processing based on data from the National House of Pensions and other Social Insurance.

If we analyze the ratio between the net average monthly public pension and the net average wage (%) in Romania, we can observe the minimum value of 33% in 2006 and the maximum value of 45.8 % in 2008. The recently ascending evolution of this variable is due to the increase of the retirement point value. This index is appropriate to compare the pensioners' living standard versus the active population, at different moments in time. Thus, the pensioner net average income decreases to a less than a half comparing to the moment when he was an employee.

Tănăsescu, Șerbănescu, Ionescu, Popa and Novac (2007, p. 99) said that is a conflict among generations, *because the active population is witness to the continuous pressures from the pensioners to increase the level of public pension, without any direct relation with the former social contributions. In this context, we have considered as necessary to analyse how has been evolve the dependence ratio in the public pension system*. For the Romanian case, we calculated this index by dividing the number of the retired persons to the number of employees, at the end of each year.

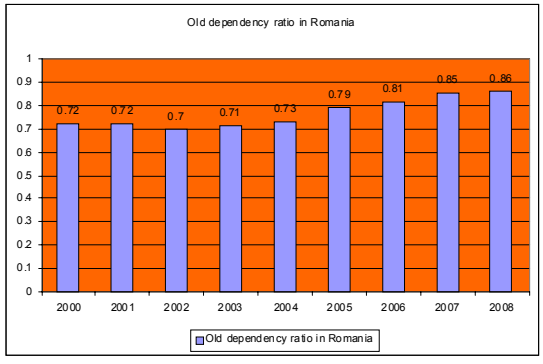

Figure 7. *The old dependency ratio in the Romanian public pension system*

Source: Own processing based on data from the Ministry of Labor, Family and Social Protection.

At the end of 1989 almost four employees had sustained a pensioner, but at the end of 2008, 0.86 employees sustain a pensioner, and the most difficult situation was at the end of 2002, when the dependency ratio was around 0.70. We found that the reasons for this fact are: (i) the early retirement by the public authorities for certain professional categories, to avoid the unemployment or social conflicts; (ii) the emigration of a significant part of the active population; (iii) the decrease in the population number, etc. For improving the specific pension system situation, there have been implemented the laws regarding the private pensions, so that in Romania will coexist the public pension system and also the mandatory and voluntary private pensions funds (the multi pillar pension system which has been proposed by the World Bank).

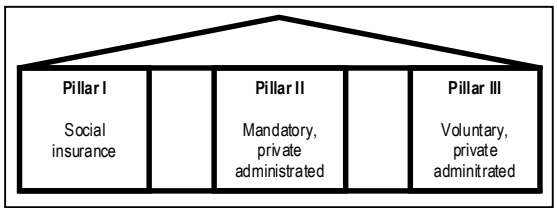

Figure 8. *The multi pillar pension system*

Source: Own processing.

The public pension system "pay as you go" with defined benefits has the main purpose to prevent the old people social difficulties and to spread the risks among generations. The Romanian pension's reform should carry out two imperative requirements: not to endanger the pension payments for those who are entitled to receive them and to allow the employees choosing to remain in the old system or to invest their contributions in the private pension funds. One of the World Bank requirements for ensuring the social insurance budget financial sustainability is to equalise the retirement age for the men and women – at 65 years.

The private pensions system – with defined contributions – has the main advantage to diminish the black market labour, as the employees would like to be hired by using official contracts, this way being aware that the money will gather in their individual accounts, and indirectly the public budget will collect more by increasing the collecting base.

Every employee pays a monthly contribution – calculated as a certain percent of his salary, during his active life to the 2nd pillar and to the 3rd pillar, for gathering his own pension. These contributions are invested on the financial market which increases their value over time; even if in certain moments the negative effects of the economic cycles may decline the individual account value. Thus, the money will be invested more efficient for the individual than in the public field and the employee will receive at the retirement a larger amount than if he pays equal at the 1st pillar. The employees will consider their deposits as savings, and the social insurance contribution was just a duty. This fact will generate a change in the attitude for every employee and this will be motivated to work harder and more efficient to have a higher pension.

4. The social situation in the European Union: present and perspectives. Some reform measures implemented on the European labour market

The European Union is currently confronted with major economic and demographic changes that are challenging its ability to maintain strong social cohesion. Following a period of considerable employment growth, the labour market situation deteriorated in an unfavourable economic environment marked by much weakened economic growth in most Member States. These trends pose a number of challenges and underline the importance of making the most of the opportunities for improving Europe's economic and social performance. In particular, as suggested by the Commission's Green Paper "Confronting demographic change and a new solidarity between the generations", a new intergenerational balance that invests in the young, that provides more support to families while encouraging the older generations to remain active could generate more social cohesion and increase the Europe's economic performance[7].

Three factors are causes for Europe's ageing society: low fertility rates, extended life expectancy, and a baby-boom generation that is reaching retirement age; together with other factors, such as unemployment and changes in the duration of the average working life, the age structure of society impacts on the numerical balance between persons not working compared with those in work. Future demographic trends are likely to see a sustained increase in the proportion of the EU population that is aged above the current retirement age of 65[8]. The European Commission's Green Paper raises questions such as: how can the decline in population be reversed? or how can society manage with the impact of an ageing population, while providing opportunities to the youngest members of society?

Age dependency ratios are important demographic indicators that relate the young and old age population to the population of working age. The young age dependency ratio is defined as the population aged up to 14 years related to the population aged between 15 and 64 years; the old age dependency ratio as the population aged 65 years or older related to the population aged between 15 and 64 years and the total dependency ratio is defined as the population aged up to 14 years and aged 65 years or older related to the population aged between 15 and 64 years. According to the Eurostat yearbook 2008, combining these indicators, the total dependency ratio in 2005 ranged from 46.6% in Europe to a high of 81.2% in Africa, where the vast majority of dependents are children. In Europe the fall in young age dependency has been counterbalanced by an increase in old age dependency, as a result the net change in total dependency has been relatively small in comparison to the most other continents, necessitating a switch in social expenditure to more healthcare and pensions for the elderly.

While old age dependency ratios are expected to increase considerably, young age dependency ratios are projected to remain almost unchanged, raising only slightly as a result of modest increases in fertility in a number of Member States. The total

dependency ratio of the EU-27 is projected to increase from 48.8 % in 2006 to 77 % by 2050. This means that whereas in 2004 there was one inactive person (young or elderly) for every two persons of working age, in 2050 there would be three inactive persons for every four of working age. The growth of the population aged 80 or more will be even more pronounced as more people are expected to survive to higher ages. The proportion of very old people (aged 80 and more) is projected to almost triple in the EU-27.[8]

Demographic ageing is inevitable and the best response to its economic and social consequences is to increase labour force participation, particularly of older workers and women. Increased female labour force participation could, however, have consequences on fertility and hence on the longer term demographic development of the European Union. The question thus arises as to how female labour force participation may be increased while improving current fertility trends at the same time.

The greying of the population will put downward pressure on labour supply, with negative implications for material living standards and public finances. Increasing female participation could partially help resolve this problem. Policies helping women to reconcile work and family life are also politically more acceptable than policies aimed at maintaining older people longer in work (Burniaux et al., 2003).[9]

In her OECD study Jaumotte (2003, p. 7) assess the role of various factors in determining the pattern of female participation rates in OECD countries. A number of policy instruments are included in the analysis, such as the tax treatment of second earners (relative to single individuals), childcare subsidies, child benefits, paid parental leaves, and tax incentives to share market work between spouses. The role of other determinants, such as female education and labour market conditions, is also considered. The econometric study takes into consideration 17 OECD countries over the period 1985-1999.[10]

First, policies which stimulate female participation include a more neutral tax treatment of second earners (relative to single individuals), tax incentives to share market work between spouses, childcare subsidies, and paid parental leaves. Childcare subsidies and paid parental leaves tend to stimulate full-time participation rather than part-time participation. However, taking parental leave for an extended period of time may deteriorate labour market skills, and damage future career paths and earnings. Beyond 20 weeks, the marginal effect of additional parental leave on female participation becomes negative.

Second, contrary to childcare subsidies, child benefits exert a negative impact on female participation, due to an income effect and their lump-sum character. Child benefits increase the disposable income of families with two children on average by 7.5 per cent. In a number of countries this increase amounts to between 10 and 20 per cent and some of these countries have significantly increased spending on child benefits over the past decades.

Third, the availability of part-time work opportunities also tends to raise participation, at least in countries with a strong female preference for part-time work. But, when

part-time working entails a wage penalty, low social security coverage, job insecurity, and little training, it risks marginalising women in these jobs. In such instances, policy should aim at fostering better access to full-time jobs, or reduce the negative future career consequences of a period spent in part-time work.(10)

Finally, female education, low unemployment rate on the labour market and cultural attitudes are important determinants of female participation, too. The education choice of a woman will influence her future career prospects and in particular on the policies which would help her reconcile work and family life. Where these policies are more developed, women should be more likely to invest in their education.

Taking into account the second instrument to control the demographic ageing, identified as solution for the European Union's labour market challenging – the increase of the employment rate for older workers, it can be remarked that the demographic pressure on pension systems is expected from Eurostat to nearly double from 2004 to 2050 (from 25% to 53%). It is essential to accelerate the increase employment rates among 55-59 and, in the longer term, to increase employment rates among 60-64 in order to ensure the future adequacy and sustainability of pension systems.(11)

According to study published by the Social Protection Committee (2008), in the European Union the share of inactive (for sickness or other reasons) increases significantly from the age bracket 50-54 to the age bracket 55-59 and then remains roughly constant in the age 60-64 before declining slightly from 65. Only about half of older workers leave their last job or business to take up a pension: about 55% take up directly a pension or an early pension. They also often leave for either unemployment (13%) or long term sickness or disability (12%). At higher ages, the share of older workers who leave their last job or business to take up a pension increases regularly, while the share of those leaving for unemployment decreases sharply, as does long term sickness or disability to a lesser extent.

Exits through direct pensions are particularly low in some Member States (notably Belgium, Estonia and Cyprus). The share of exits through unemployment lies at around 15% on average and is rarely lower than 10% and can exceed 25% (Denmark, Estonia, France, Lithuania, Portugal, Finland and Sweden). The share of exits for long term sickness or disability is also generally around 15% (it is lower than 5% in Italy, Cyprus and Latvia and around or often higher than 25% in Estonia, Ireland, Hungary, Lithuania and Finland). The main reason for retirement or early retirement among 50-69 is having reached statutory retirement age (about 40%), which clearly increases with age brackets. For about 10% this is related to difficulties in the labour market (job loss 7% or problems related to job 2%), similar to reasons linked to health difficulties (own health or disability 12% or care responsibilities 2%). About one third declare a main reason linked to favourable financial arrangements to leave (9%) or a preference to stop working (20%). (11)

The recent improvement in the employment situation of 55-64 also coincides with a growing divergence between Member

States, indicating slower progress for some groups (men *versus* women, higher educated *versus* lower educated). In Romania, this trend is not quite clear; for example, for a company which will employ an unemployed person – graduate or a person with an age over 45, according to the Romanian specific law, more incentives, as number and values, are received for graduate than the older worker. The multiplicative coefficient, applied to social reference indicator, is 1.5 for graduate and only 1 for older worker.

Most Member States are engaged in reforms to adapt these schemes and reducing the take-up of early exit benefits. Reforms are focused on the design of unemployment, early retirement benefits and access to disability pensions and rehabilitation. Some Member States have also reviewed taxation and the design of private pensions. Caused by the actual financial and economic crisis, the Romanian Government initiated two measures: to prolong, from 12 month to 15 month the period for unemployment benefits and the attempt to eliminate the possibility to obtain, in the same time public pension and salary, for those persons working in the public system. These two measures cannot be integrated in the European Union's trend for adapting the macroeconomic policies to the new challenges because will maintain with three more months outside the labour market some active persons and, on the other hand, will encourage early exits for older workers, especially for those with more skills and a grater level of education.

More steps will be needed in a number of Member States in order to achieve more systematic reforms to create labour market opportunities for older workers and less skilled ones as they can be less employable. Retraining and preventing early retirement by improving workplace health and safety standards are necessary, too.

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Notes

(1) It is possible that the decreasing in the stock prices listed on the Bucharest Stock Exchange, during the period 2007 – 2009, to be less detrimental if on the Romanian capital market would exist significant investments from the private administrated funds, having as more important objective long term investments and lesser speculative ones.

(2) At the end of 2008, Romania had approximative 200.000 beneficiaries of special pensions.

(3) Romania has a transition period, until March 2015, to raise the retirement age limit, the complete contribution period and the minim contribution period. Otherwise, it would be existed an empty space of three years with no retired persons.

(4) The decision is a political one, when the Government or the Parliament adopts laws. Analysing the regulations issued in this domain, we can observe that, in this period of time, we have five laws, 14 Government Resolution, four Emergency Government Ordinance and two Government Ordinance. Thus, the Romanian Government acted both as executive and legislative authority.

(5) If, in the first place, this was represented by the regularly income of the social insured persons, minus the income with it was not stipulated in the individual or in common work contract, at the end of the period it was represented by the gross income of these contributors.

(6) For normal work condition.

(7) According to European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, "The social situation in the European Union 2005-2006; Overview", 2007.

(8) See "Europe in figures", Eurostat yearbook 2008.

(9) See Burniaux, J.-M., R. Duval, and F. Jaumotte, "Coping with ageing: a dynamic approach to quantify the impact of alternative policy options on future labour supply in OECD countries", *Economics Department Working Papers No.371*, 2003, OECD.

(10) According to Jaumotte, F., "Female Labour Force Participation: Past Trends and Main Determinants in OECD Countries", *OECD Economics Department Working Papers*, No. 376, 2003, OECD Publishing.

(11) See The Social Protection Committee, "Promoting longer working lives through pension Reforms. Early Exits from the labour market", February 2008.

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Legea nr. 19/2000 privind sistemul public de pensii și alte drepturi de asigurări sociale

Legea nr. 164/2001 privind pensiile militare de stat

Legea de revizuire a Constituției României nr. 429/2003

Legea nr. 179/2004 privind pensiile de stat și alte drepturi de asigurări sociale ale polițiștilor

Coping with Robust Development. Contribution to Lengthen Life & Pleasure

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Abstract. *THuman beings' work and life are similar to flowers that last longer depending on the conditions quality they endure. Deeper awareness and calculated responsibility generate better understanding of what being self-motivated is. It also shows another way of appreciating and enjoying Life and Work by treating Environment and Society properly. We combat here the myth of no choices in choosing policies that affect our lives. By exploring new approaches of economy and society, by taking the commercial company as example, we enlarge the results to the societal level. The paper demonstrates the need to use complex systems and apply them to both economic and social levels to turning the trends into societal advantages as a handy alternative to believe in.*

Keywords: complexity; soundness; added value; environment; change management.

JEL Codes: D8, D83, F15, H79, I20, I31.
REL Codes: 5C, 7G, 12C.

1. Carrying the torch of development

The frequent changes happened under the Science's stars are influencing Society and Life in a very complex way. Largely based on information, the scientific results have taken the world apart and put it together, with wide and complex understanding of both environment and business.

The word *complex* has even more challenging associations, with processes happening at both economic and social level, with a light perception on some consequences for the future development of the Society. It is at that level that many factors and variables bring into equation *unrevealed* explanations and potential outcomes to which the logic power tries to give a real sense. When the right tools are applied at both social and economic level, using a complex approach of understanding the results, the wellbeing sounds robust and promising. Under the super-networks implications, more and more people realize that there is no knowledge of parts giving accurate insights into the organization and functioning of complex wholes. Within this idea the behavioural approach took the research advantage with both economic and social inclinations and consequences. The circumstances of the recent economic turmoil brought macroeconomic concerns to the fore. What began as a basically management-oriented study is now situated firmly in the realms of political economy.

We keep in mind that economy is a constant engine of change: innovation and creativity are beyond the mass production from which it differ deeply enough to differentiate from each other in creating common value or isolation and separation. This new economy should be understood as the richest one in meaning, as the most appropriate to figure out the main streams of development inside a solid net inducing sectorial turbulences at all levels. It may not be the *perfect* but definitely can be the *right* one.

As complex systems generally include people, companies, and their behavioural attributes, the interactions between such elements – connected to each other – leads to this new economy with complex patterns, permanently changing under fluctuations, *n*-dimensionally, in space and time. It is not difficult at all to point the axes of this new economy, as follows: prosperity as the result of innovation not of optimization; need to crop the unknown versatility and use it for the common benefit; communication as the core of inter-relating inside the new well-net development; sharing the knowledge without any fears of competitors by developing robust alliances.

If we consider some fundamental principles in developing a new approach of economy and society – connection, fulfilment, exponential added value, reverse evolution of prices, tolerance, generosity and emotional transfer by connecting individual and corporate values, performance by fast innovation – the point where less can be more and bigger isn't better is already got. And this happens because things may be better than they look to be.

2. Complex opinion for market and society

An economy is not always an aggregation of components but depends on a higher-level organization that grows out of interactions among those components. We live in a complex, mercurial world that cannot be described only by simplistic concepts. Under globalization process we assume and require levels of flexibility and sophistication that we never had to make explicit before, and that will mean real changes in thinking too. Valuable tools in this process will be networking and coaching partnerships (Costea, 2008, p. 19). This does not mean at all marketing campaigns, promotions or ethical trade focus groups, rather actual (economic and societal) awareness transformed into profit and power that is shared with partners, any time, everywhere. The action space is shown as a 3D ellipses game, each one having two foci. These action spaces are positioned in an orthogonal coordinate system. Each of the three parts tries to reach its own optimum. To a very great extent, the optimum of the universe cannot be reached for a certain time period.

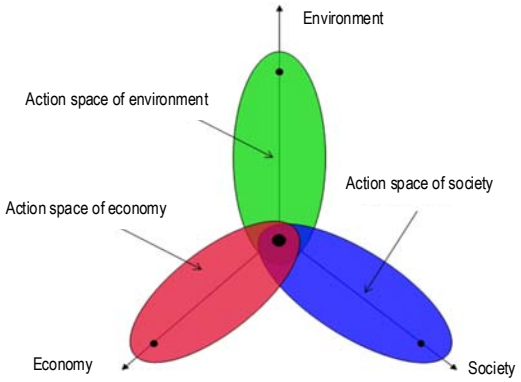

Figure 1. *The natural situation*

Maybe it cannot be reached at any time. The effort of each subsystem is represented by a vector of interactions as shown in the Figure 1.

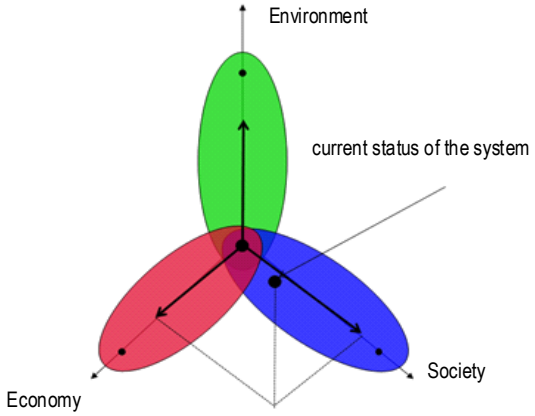

Figure 2. *The current situation*

The length of each interaction vector represents the power of each subsystem. So the current status of the system is the result of the addition of the three vectors as shown in Figure 2. The same happens with any subsystem, including organizations. There is good evidence that networks of small and medium sized firms can work effectively and to the mutual benefit of all participants. The networks system is not reliable when conceived only horizontally. It is required to set it up vertically to link individuals with society, at the interest level. Whether regional or global, if it is effectively connected, the communication will be self sustaining. Economic markets and supply chains, human body and behaviour both at work and inside the society – with their ups and downs – can't be understood from conventional perspective. They challenge and surprise us, aboveboard, with irregular architecture and structures, environmental noise, with patterns that rebound reality under entropy and enthalpy influences.

It is worth the need to see correctly the economy and society as it should be if we want to build the right business that requires not only study but also understanding of the business as both a complex matter and a framework established inside the nature and society. The vision of a networked knowledge-based society brought into discussion new angles of the old topics of management systems. The complex approaches of life and profit, of goals and wishes, of objectives and targets are searching for customize ways of operations and behaviour to be considered, new ideas to sustain explanations, new tools to be used. This should be that State-of-Art, the knowledge bridge, able to carry out the gap between natural, social and economic environment and build the right world in a society that wants to be proud of it.

The social and economic importance of life and business complexity and their link with high standards and profit is, sometimes, risky. Under such circumstances, unexpected demands are brought out when growing global stands for higher integration of business processes and improved efficiency, sometimes unfortunately connected to failures or bankruptcy when exposed to unknown risks.

Changing the style of action may bring to us in front of a new *Law of Success*: use the sensorial to identify the weak signals of the market, develop mental agility to detect innovation, use all resources to develop connections and reliable relations bringing with them the best of solutions, develop the culture of acting *Big*.

Looking beyond the words, understanding individuals and groups, improving the listening skills, generate no boundaries communication, where everybody is somebody, where any asked question gets an answer, where the knowledge limits are moved on as there is always something more to get acknowledge of. Good *net workers* may create great leaders – and *systems* enabling the connection with others: joining networks, connoting valuable lifetime connections with *key players* and other members (Henderson, 2005, p. 19) mastering innovation and creativity. Innovation doesn't require large efforts: matching creatively the right opportunity and the right competencies help a lot. Not exclusively focused on new technology, innovation help developing new models and strategies under which every bit is important. These count but must be coupled with an organization, metrics and rewards to make innovation manageable and things happen better under the right behaviour.

Superior innovation enables companies to grow faster, better and smarter, partially by protecting tangible and intangible assets from the competition erosion. Innovation requires solid management skills and organizations that get things done and not *alchemy* (Henderson, 2005, p. 19) mystifying transformation.

Innovation tackles with key business functions coming up with the right idea, selected and implemented in the right way, at the right time. Innovation is not solely about processes and tools. Facts have proved this happening inside networks, where:

- creation of value is encouraged by stronger leadership;
- innovation is considering as a part of the business mentality;

- business strategy is relying on matching innovation by balancing creativity;
- real value capture is easier managed if innovation networks both inside and outside the company under the fairness and performance rules. Under competition it looks different when competitors struggle to judge, evaluate or interpret each other situations. This may happen because confusions may connect to information and knowledge (Prusak, 2006, pp. 18-20).

Usually customers focus on bits and pieces of information they foregather rather than seeing the whole picture. While some clients find the time and patience to examine all possible choices, with pros and cons, means they enjoy the rational dynamic approach of decision taking while there are others that like to take decisions based on perceptions, sensations or emotional reasons and explanations. Rational linear choices do not necessarily make life easier for oneself while others may explain a great deal of the shadow side of decision making.

There are also recognized behavioural characteristics that everyone has. Knowledge of profiling methods as used in the intelligence and law enforcement realms simply allows analysts to take what would appear to be innocuous traits of a subject and extrapolate behaviours. If we know that a particular executive displays particular traits that individual's responses in various scenarios are, to a degree variable with the number of data points, predictable. This is not about a *mass psychological screening of every employee* (Prusak, 2006, pp. 18-20). Each of them may access different types of information and value it differently. A standardized policy regarding the knowledge of information and the power of the right processing operations can be a good step in applying a new but challenging technique, emotional competitive intelligence in business. The value of employee and the way they value their own training in task-related psychological skills is widely – and increasingly – acknowledged in the corporate sector. According to Lawrence Prusak (2006) information is a one-dimensional *message,* represented by an *image,* a *document* or any other pattern or physical configuration. It's most special quality is to be stored and disseminated anytime, any where, as *knowledge results from the assimilation and connecting of information through experience* (Prusak, 2006, pp. 18-20). The experience, as a result of mentoring, training, coaching and learning process, helps to embed the knowledge required by organizations in ways that *have largely evaded codification.*

Intelligence – often cited as the world's second oldest profession – remains today much as it has been for the last half of century: a tough discipline that relies on the smarts of its analysts to interpret and communicate uniquely insights and implications to decision-makers and policymakers. While the meaning of intelligence in business is quite understood, the put together combination, emotional intelligence in business competitiveness may refer at landscapes, scenarios, development, war games, competitor lifecycle profiles, and portfolio analysis to understand what the competitors may do, what the potential customers may look for; in one word, to

understand the right dimensions of market of tomorrow.

To reach the point some priorities issue for to consider:

- Branding fundamentals system to expand the environment of emotional business intelligence (EBI), addict specialists, strengthen its role and promote excellence practices. The brand positioning statement must provide the vision of the beneficiaries, and the benefit of the customers;
- Rethinking the value of the management button line and EBI insights by repositioning the intellectual property as strategically as possible compared to the competitors;
- Making alliances and advocacy the market no matter the purpose of the activity is: a market report, a long term strategy or business development design. Once shared, the insight can influence the powers to facilitate change. This will help to see and bring new opportunities there where others see only *impossibilities* (Poissant et al., 1989).

For many companies business intelligence (BI) is only a small function located and kept up in a varying department of the business, operating as part of a market research. In fact, BI supports different types of business activities and assortment of BI and CI (competitive intelligence) tools, supply intelligence to multiple levels of management through different intelligence deliverables. When asked what changes would allow improvement the company activity, the top responses involve accessing, integrating and sharing information together with better education at all management levels.

3. When less is more and better is bigger: from the old techniques towards alternative approaches

Competitive Intelligence (CI) professionals apply many analytical techniques to turn information into actionable intelligence. But CI practitioners generally prefer to use only a few techniques, and those preferences have not changed much over the years:

- *collection*: competitive intelligence leverages a variety of primary and secondary sources of which the internal employees and publications (websites) are the most valuable;
- *analysis*: competitor analysis and SWOT sound familiar to most practitioners;
- *dissemination*: despite the need of a professional integration of the final information, a large audience from internal and external environment could be interested in the CI results and techniques (emails, hard reports, fast personal courier).

There is, of course, a safer way to improve CI standings by leveraging awareness and visibility, by creating a large exposure to senior management, demonstrate the value and the potential to strengthen the sales forces: neutralizing the competitors (trivializing) the competitors high points; opposing another point of view to claims made by competitors; turning up negative references; identifying new competitors trends changes, purposes; reducing competitors' credibility by any handy means; finding competitive responses to requests for proposal (RFP) when the entire

set of information with regard at pricing, project timing, key personnel, product positioning in the competitors' pattern are on the website; incorporating the feedback information in the analyze; uncovering the customers' dissatisfaction, as strategic long term exercises fitting the decisions to the correct direction-setting.

Education by teaching and coaching followed by long life mentoring may give a new vision of the staff over this activity. Used to set up better goals, this new education maps the right strategies and look for improving the professional skill. No matter life is the real test, when it comes down to opportunities, training and mentoring may open more windows to abilities and alternatives. True education happens when practitioners are afforded the opportunity for long-life on the job learning from supervisors, mentors or external coaches. With it, little becomes more.

Market people do not always believe to what they hear. Often they do the opposite they are advice to do. And there are also other people who prefer to buy while the others are selling and vice versa. Sometimes people do not make choices in their own interest, then, you may need policy to direct people to make choices in their interest. People have reasons for behaviour other way than enlightening self-interest. Some other times, in investment transactions, the intensity of motivation of buyers and sellers has not been the same when sectors that are buying are more motivated than sectors that are selling (the price will rise, and the opposite occurs when selling groups are more motivated than buying groups). Negotiators look for compromises, usually following advices from brokers or some commentators. Such opinion leader of a market guru is several times cited with fixed coordinates and its effect is kept constant. Therefore something has to be done in order to reduce the number of indecisive actors and determine them to act but under the condition of decreasing the fund for advertising. This way the profit will increase from both ends as antithetical people in the society are needed for better utilization of such results.

As already said business intelligence is the foundation for performance management using analysis of relational data new trends, threats and opportunities may be discovered. This will always shorten the time to act, reduce the demand on resources for constant vigilance. Breaking the limits, the combination of Business Intelligence and planning (SAP) capabilities is core to a complete, closed loop performance system connected to forecasts, targets, and reports.

Companies will be successful in the market if their customers are satisfied, and made to feel important. The primary rule still remains how to know the potential customers and transform them in real customers.

The most frustrating part of this scenario is that the data needed to make better planning and forecasting decisions are at companies' finger. The tools to integrate the analysis and eliminate restrictions and risk limits are missing. The ability to extract data and provide meaningful planning and forecasting analysis is desirable for any management teams. Generating in real time available reports founded on reliable sources tailored to meet any companies requests, will provide unattainable yet but very competitive advantages.

Optimizing customer knowledge and profitability with integrated analytics to avoid any potential risk will achieve its goals when efficiency gains will function systematically towards performance, working in a multiple and extensible network. Successfully organizations recognize that integrated analytics will drive the organization ability to maximize revenues.

The irony of the consistent failure of companies to formalize data activities in their projects is that many of these same companies are currently in the throes of a quality program like Six Sigma for which the purpose of "zero defects" not affect only the company bottom line but individual compensation. Data accuracy is one of a project's many measurable success criteria. If companies aren't factoring the quality of their asset into their projects in a rigorous and permanent way is not only a financial risk, it contradicts the "ongoing enculturation of their quality-ay-any-cost-philosophies" (Poissant et al., 1989).

Each customer should be treated as a high value customer (real or potential to become real). Their high profile business requirements and associated business rules should be very clearly stated. This involves examination data with regard at:

- a min-max value generated and counted for all fields;
- the elimination of invalid figures or corrupted/incomplete data;
- checking the data hierarchy and their cross-joined cardinality records.

The lack of adequate fact-based decision making, the inability to pursuing new business opportunities or for management to having an accurate view of business operation are among the biggest impact of poor data quality. Therefore the first priority for companies is to be able to accept the bad there where it is and decide to change it with new orientation to cover the lack information by initiating a data quality audit and start recording complaints about it. This will bring together friends from business owners open to collaboration and quality data improvement in a formal pattern. This is the single way to create an excellence Data center.

The institutionalization of information may enable by its executive the rethinking of the data management and eliminate the inaccurate information to be delivered to market under enormous saving of time and money. When it comes to acknowledged business priorities most managers do not know the cost of data quality until abandoned work or cancelled projects are obvious. Educating business into hidden costs management and projects can spur managers into action. Starting with a clean up effort and a real audit report they may learn to correct their approach of data quality necessity and dedicate more time to it, promoting a large manager program of excellence in quality finalized with lower costs or additional revenues.

To be effective, leaders must inspire their group toward a common goal, being able to relate to these groups by empathizing with their emotions, taking time to reflect how to learn from ups and downs, encourage appropriate and constructive feed-back, in a world work at the same vision as a managerial team inspiring performance and a partnership model. This will give more power and motivation to empathize with other and find the balance in everything.

Some important rules would be rethought and considered as compulsory: potential customers should be turned into real ones; the errors and the hidden procedures managing to risky activities and low profits be identified; the customers' knowledge be assimilated as a complementary method between marketing, ERC, CRM and BI.

Customer knowledge refers to understanding all customers' profiles, habits and needs. What they do, how they behave, where they buy from and what is essential if a company intends to align its processes, products and services and build a real strategic partnership with. Many companies do have the knowledge of their own customers, but frequently this is in a fragmented form and difficult to share or analyze if not incomplete.

Nowadays, under a sharp and ferocious competition in the battle for new markets, customer knowledge is quite a big topic. Recent study of business failures agreed to the idea that often failure can be put down to complacency creating a gap between what you think customers want and will put up with, compared to what customers really want and will go to your competitors for.

To avoid additional risks some orientation are underlined to be considered: the identification of all possibilities of gains by wide increased efficiency; transparent functionality; high quality performance; integrated approach of both shops/companies and clients inside the same complex system; rethinking n-dimensionally the consolidation and partnership extension with any client. Customer knowledge can be approached under two aspects.

The first one runs as a *collection of information* and *viewpoints* that an organization has about its customers. Using such definition, the role of customer knowledge management is to capture and organize this data to allow it to be shared and discussed throughout the company. The central point under this approach is that for good results a stronger customer relationship needs to be built. This is why the current knowledge about customers is never sufficient.

The second step takes into consideration the axiom that customers (De Vries et al., 2002) are *more knowledgeable* than we realize. Thoughts, behaviours, wishes, habits, actions are always important fields providing new information. Therefore the balance should always be inclined towards the right value to get from the information needed than the collection of information already had. To create emotional business data bases involve the connecting of information through experience and the knowledge of large competitive circumstances may impact an organization's a future strategy to compete. There is neither intelligence nor creativity outside the knowledge. There are dozens of business intelligence specific software tools that litter the market excel at managing and handling information. The *Shakespearean* commercial question will refer at the future of knowledge and business intelligence: will they by a distinct human endeavour or will be replaced by IT software tools and new models?

Individual or group experiences in applications, competitor behaviour, possible future solutions together with quantitative insights, a wider variety of less structured information as their own ways of gaining, sharing and expanding knowledge with other customers that will help to build insights into customer relationships. It should include information about:

- individuals (emotional too),
- customer experience and creativity,
- loyalty schemes,
- active lobbying knowledge and knowledge partner,
- customer success,
- innovation,
- organizational learning, performance against budget; customer retention rate; performance in terms of customer satisfaction. That helps explaining who those individuals are, what they do and what they are looking for, and may enable broader analysis of customer base as a whole.

The new aim of companies should be to setting up a strong systemic network of customers so that they can build and manage customer knowledge and relationships over longer terms. To bring some help a new application of the use of Formation of Languages; Equality, Hierarchy and Teachers models is suggested (Tuncay, 2007, pp. 1061-1070). In this respect, we propose to use the above mentioned model - created by Tuncay (and Stauffer) and developed later into another application (Costea, 2008, pp. 267-270) where languages are replaced with *N* hypermarkets brands with a different number of shops spread into a certain geographical area. Each shop has *k* real customers with *M* needs (*wki*, $k \leq N$, $i \leq M$). For any need there may exist many related items assortments or varieties belonging to different classes of products (*j*) underlining, symbolically, five different subentries at most. So we take $1 \leq j \leq jmax$ for every need *w* and for each j we assign a representative real number *r*. The maximum number jmax of subentries *r* is also determined randomly between 1 and 5, independently for any need *w*. Clearly, *rkij* = 0 (*wki* = {0, 0, 0, 0, 0}) corresponds to an unknown need of the customer *k*. Customers' needs are groups of up to five real numbers: *wki* = {*rkij*} (Tuncay, 2007, pp. 1061-1070). Initially there is no consensus about purchases, but the consensus may be set through several processes.

Thinking for example, consumption - not only as a concept or a culture but a measurable integrated culture (A,B) underlining the trends, the risk of authenticity, external assets integrated in the world economy will give another approach and meaning of it and each contribution will be easier emphasized as in the Figure 3. It may permit to emphasise the efforts (W_F) inside relationships between quantities (Objectives), of different dimensions, in connection with other quantities (parameters) applicable to any field. It will result an ϕ net individual/corporate contribution that, taken into consideration as a new indicator, could change the future destiny of the society.

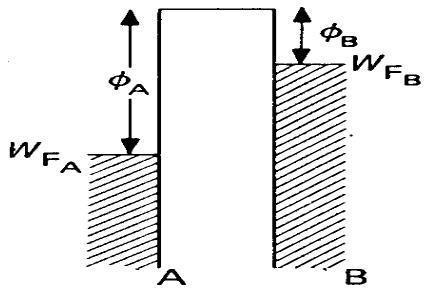

Figure 3. *Measurement of net economic or social contribution*

The brand will emerge in that area with the number of customers where the clients walk to a certain shop Lk varies from

customer to customer, mainly at the opening of the shop and this fluctuation fades down with time since Lk $\rightarrow$ L, if convergence occurs. Later, by assigning to each customer a random real number (rank; greater than or equal to zero, and less than one) a hierarchy may be established. Some leaders opinions with ultimate rank of unity into decisions to choose a certain brand should also bring some more information.

Applying the Caglar Tuncay's model, the values for initial rkij's should be changed into time dependent ones, i.e. rkij (t). The purpose is to check the customers' behaviour and the way they look for satisfying their needs and buy from one place or another, from one hypermarket brand or the competitors', on their own need or under the impulse of opinion's leader.

This model may bring interesting information on what they buy, when they buy, why and how much for. In the long term the company may think to design new products with more added value incorporated in order to satisfy those needs issued from emotional behaviours. This way (Toffler, 1980, p. 25), customers will fill the dual role of both producer and consumer in creating net value inside a team-based co-learning process where mutual innovation and joint intellectual property are obviously considered. There is no point in thinking wealth and durable profit underestimating the customers diversity and falling into the possible "trap" of over-reliance on (existing) customer knowledge without appropriate sensing of wider environmental impacts and influences.

Mutual understanding, reliance and confidentiality must be agreed upon and consistently implemented. Careful consideration has to be given to degrees of openness in sharing of knowledge, and cultural issues of respect, trust and ways of interacting have to adequately co-shaped and optimized.

It is quite a challenge to build successful models of a wide range of socio-economic phenomena in which the agents operate with low cognition, both in their ability to gather information and process it. This is in direct contrast to the high levels of cognition assigned in economic theory, even under bounded rationality. A key feature of all these models is that agents operate on networks. A particular interest is the extent to which assigning greater cognition to agents means that models become successful in terms of their dynamic consistency with stylized facts. In order to model natural human behaviour, it is firstly necessary to capture this behaviour.

The start consists in modelling behaviour for specific situations; once human behaviour captured, the following experiments perform. Given a virtual environment, a sufficient number of subjects are asked to execute a human task in this virtual environment. The hypothesis is that the combination of the motion paths and the clues for making/changing decisions will provide decision rules to make reliable predictions about human behaviour under the same conditions when using virtual persons. Later, if the traditional definition of customer is expanding, other parties such as suppliers can also be included. They may be a new step forward, another rich source of valuable knowledge for companies, and a source that lies beyond the usual corporate boundaries.

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Banking Restructuring Techniques in the Economical Crisis Context

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Abstract. *Banking restructuring regained leading place in commercial banking activities following ongoing crisis. Many debtors are facing serious trouble in normal debt repayment due to increasing number and volume of non performing loans in banks' portfolios.*

In order to deal with these issues and to secure existing exposures banks use restructuring techniques like payment rescheduling, debt-equity swap and write-offs to ease debtors debts and to help viable businesses to successfully survive recession.

Keywords: restructuring; crisis; non performing loans; debt; restructuring principles; early distress indicators.

JEL Code: G34.
REL Codes: 11C, 11G.

The ongoing crisis has a notable impact on economic sectors and many companies are facing difficulties in refunding loans contracted from credit institutions.

Commercial banks are confronting with the increasing number of situations in which financed companies experience difficulties in loans reimbursement due to decreasing business volume especially in the sectors most affected by recession: construction, real-estate, transportation, automotive industry and media.

The increase of payment delays or even temporary or total impossibility to repay debt made necessary to increase the restructurings as a response of reinforcement capacity of banking institutions through the foundation or the extension of the departments specialized in work-out activities.

Problematic loans are analyzed depending on the features of the financed business and divided in two major categories:

- Viable credits that can be recovered after the restructuring of terms and conditions, mostly of interest and principal, while declaring insolvency remains last option,
- Nonviable credits that can not be reimbursed from cash flow generated in the normal course of the business and the options of declaring the anticipated maturity and foreclosure are a priority. In these cases the speed of reaction of the banking institutions can be conclusive and can mark the difference between the recovery of a bigger or of a smaller part of the due debt.

Forced execution in case of nonviable credits must consider a serious analysis which should mark if the only option is the default and if there are enough collateral in order to allow recovering the loan and to cover the expenses caused by the operation. In the case of real estate properties it should be considered the present lack of liquidity of the market which implies the acceptance of decreasing the nominal value of current assets through important discounts to allow speeding up sales, therefore avoiding 'wait and see strategy".

Analysis of the bank in this case concerns the possibility of temporary keeping the assets in the portfolio and selling them in the future under more favorable market conditions, in order to recover a bigger part of the value of credit granted.

In the debtor credit risk review process, banks are concerned with identifying ex ante the possible reimbursement difficulties and perform stress tests for identifying the first warning signs which could indicate the occurrence of payment difficulties.

Banks monitor two types of indicators which provide early information about the situation of the analyzed company as follows: First group of indicators are:

- market share;
- income from sales;

- current liquidity ratio;
- cash flow level.

Second category of indicators:

- unit costs;
- level of the provisions;
- financial losses (generated mainly by foreign exchange losses);
- short-term debt;
- fluctuation of personnel.

If at least three of the indicators from first category are situated in the same time at a descending trend and three of the second one are at an ascending trend, the bank will have to investigate the debtors situation closely and to propose already a preliminary action plan in order to secure its exposure and to recover debt.

Causes that generate decline according to DiNapoli and Fuhr can be grouped as follows: loss of market share (29%), inability of management to administer the business properly (24%), financing structure (18%), bad debts (10%), competition (6%) and other causes (13%).

Loan restructuring can take two forms: *soft restructuring* – that concerns only temporary postponements or small waivers granted for credit facility (possibly a short period of grace for the payment of the principal or extension of maturity, without modification of terms and conditions initially agreed) and *hard restructuring* – addresses to debtor that are unable to honor the debt service as it was originally approved, and requires a grace period extended from the payment of the principal (usually at least one year), maturity extension, partial or total transformation of a short term facility in a medium or long term facility, complete reevaluation of the credit relationship and repositioning of the bank in relation to the debtor: cooperation position based on the determination to pay of the debtor or the force position imposed by the debtor's hostile attitude or the lack of cooperation of it.

Restructuring techniques of the credits used by commercial banks can be grouped into three large categories:

1) Restructuring of the payments and consolidating the debt by defining a new reimbursement schedule in accordance with the real payment possibilities of the debtor. Credit consolidation as a restructuring technique implies transforming all facilities of the debtor in one facility which would simplify the loan administration and monitoring costs of the bank.

2) Cancellation of a part of debt if the debtor is unable to pay but there is the possibility of recovering a part of the granted credit. Bank performs the analysis comparing the value that is possible to be obtained from the execution of potential decreased collateral with the cost of foreclosure.

3) Debt-equity swap. This can be achieved by converting a part of debt in capital (debt versus shares) and by mobilizing new capital in the form of issuance of bonds or shares. Debt-equity swap has the main advantage of restoring confidence in the company as a result of

the involvement of shareholders and allows management to focus on the ongoing business.

The main feature of this restructuring technique lies in the complex mix which implies high expertise but also additional costs.

Choosing the modalities of restructuring depends on the concrete situation of the debtor, the degree of indebtedness of and the ability to generate cash flow.

Restructuring the credit facility is a very complex process and the proposed solution must be adapted to the specific debtor as the case might be. At the same time it should be considered that the subject of the restructuring process must agree to the solution proposed by the bank, avoiding a voluntary declaration of insolvency by the debtor.

Bank analyses before starting the restructuring process if the initiation of it will improve its position and will allow realizing and respecting of an output from the credit relationship without turning to the expensive process of executing warranties.

The risks assumed by the bank in the restructuring process are of multiple origins and come from the financial area, as well as business and reputation area. In order to limit the risks it is requested the improvement of the own funds level requested of the debtor through additional capital contribution, the increase of the engagement of it along with accepting not to distribute dividends in the phase of restructuring loans and to better control costs.

Restructuring is required in the most frequent cases by the debtor itself in order to reduce the financial burden by redistributing over a greater period of time principal and interests.

A particular approach to financial restructuring is the so-called London Approach which had its basis in the support of Bank of England. Following the financial crisis in the 70's, the Bank of England encouraged the promotion of a set of good practices regarding the restructuring of loans. It was found that both banks and financed companies were facing a lack of quality financial information on which to base their strategic decisions. Also the real level of debts was generally underestimated by the loaners, as well as the terms and the conditions associated to the credit.

London Approach is an informal mechanism by which creditors agree over a form of restructuring which implies the sharing of potential losses. Bank of England became involved suggesting to commercial banks new refinancing terms and has been making lobby around creditor banks to accept. Restructuring that has taking place from the perspective of London Approach showed the need for a mediator, which may be a public or private institution and may get involved in the process of arbitration between debtor and creditor and also the possibility of the state to get involved by co-financing the restructuring process.

In the restructuring process there can be highlighted a few general principles whose application makes the difference between success and failure of the operation:

1. The purpose of restructuring must be the viability of the business not only resolving the financial aspects.
2. If the subject of restructuring is a company which gives correct information, the creditors may agree on a defined period in which they will not exercise their right to request for insolvency or to prosecute enforcement execution of the warranties.
3. Bank restructuring should not be done in order to conceal inefficient loans gathered in portfolios.
4. Erasing the debts is the last measure considered by the creditors and this only in exchange with participation rights (shares) and warrants.
5. The success of restructuring depends on choosing one of the creditor banks as a leader in order to supervise the process and coordinating all creditors' actions.
6. The decisions will be taken only on the basis of well checked information and certified by an external auditor.
7. Changing the credit terms and conditions must take into consideration rather to be covered with collateral than the increase of credit that pushes more the burden of the debt and puts in danger the positive effect expected from restructuring process.
8. Selling the debts to third parties on the secondary market will be made under the condition that the new creditor will not stop the restructuring process approved at the beginning by old creditor.

Banking restructuring aims to achieve several often conflicting objectives: avoiding bankruptcies of the credit through accumulation of inefficient credits, avoiding the credit crunch, improving the efficiency of the banking intermediation level.

Banks are in front of two major categories of issues: stock and flow as follows: the stock problem implies the banking balance sheet administration so that the volume of own funds will increase and the inefficient credits will be eliminated. The flow problem is addressed to improve efficiency, the methods of evaluating the credit quality so that the banking balance sheet will not be deteriorated again.

The lesson drawn from the recent global crisis showed the necessity of a stronger government intervention in key domains of the economy (financial, industrial, transportation) through massive injections of capital to blur the effect of the crisis and initiate economic recovery.

The crisis can be seen as a restructuring opportunity for the sectors marked by low efficiency and high costs

and a separation of business with growth potential, circumscribed to the concept of sustainable development from the areas already marked by decline.

Restructuring will also distinguish the banks that will be appreciated in light of the number of business saved and made viable after the transit of the crisis.

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Theoretical and Practical Aspects Regarding the Nulity of Commercial Companies

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Abstract. *The absence of a Romanian legal definition of the concept of nullity of commercial companies arouses a lot of questions. The delimitation of this concept is very important for a correct establishment of its field of application. In other words, are the cases of nullity of commercial companies regulated only by Law no. 31/1990 or by the provisions of common law as well?*

Started from the fact that the nullity is not considered by the legislator a simple sanction applicable to the juridical acts but it affects directly the existence of the company and becomes a means to sanction the creation of a legal person by disregarding the imperative legal provisions, we analyzed firstly the Romanian (II) and the EU legal provisions regarding the nullity of commercial companies. The elements of this analyze helped us to qualify the nullity of commercial companies and its effect (III). Finally, through the conclusion formulated we hope to call the attention on the fact that a company, even created through the non-observance of the legal rules, can be viable from economic point of view and it is senseless to make it disappearance.

Keywords: nullity of commercial companies; nullity of juridical acts; absolute nullity; relative nullity; declaration of the commercial company's nullity.

JEL Codes: K22, K35.
REL Codes: 5D, 13H, 14K.

Introduction

In its initial form, the Law no. 31/1990 on commercial companies (published in the Official Monitor of Romania no. 126-127 of 17th November 1990) had no special provisions concerning the nullity of commercial companies. In this regard, the juridical doctrine issued two different opinions.

In a first opinion, the authors had considered that, by excluding the sanction of nullity, the legislator understood to give priority to the protection of third parties' interests and the security of juridical relations. Thus, the idea launched (Cărpenaru, 1992, p. 10) was that "between sanctioning with nullity the infringement of legal provisions regarding the setting up of commercial companies and not sanctioning such an infringement, the legislator accepted a compromise and the company which was set up disregarding the relevant legal provisions are to be considered as not being legally set up".

Another opinion, expressed by the majority of the Romanian authors (Șcheaua, 2002), considered that, in the silence of a special legal rule, we should consider in this area that the common law provisions regarding the nullity of juridical acts apply. This is possible if we take into account, first of all, the fact that the commercial company is a contract.

Nevertheless, we cannot omit the fact that, through the company contract and following the company's incorporation in the Register of Trade, a new subject of law is created. According with the legal provisions in force, the company is a legal person from the moment of its incorporation in the Register of Trade. Thus, as a legal person, the company has its own existence, independent of its associates/partners or shareholders and surpasses the parties to the actual contract. This is why, within this field, it was imperative to adapt the common law regime concerning the nullity of juridical acts and to define expressly the cases of commercial companies' nullity.

The Romanian legislator took into consideration these requirements in 1997, when Law no. 31/1990 had been amended through the Urgent Government Ordinance no. 32/1997 (published in the Official Monitor of Romania no. 162 of 18th July 1997). The above mentioned UGO was adopted with modifications by Law no.195/1997 (published in the Official Monitor of Romania no. 33 of 29th January 1998). This new legal text provides a modern conception regarding the nullity of commercial companies, aiming to create equilibrium between the need to protect the third parties' interests and the safeguard of security of legal relations at the same time. It was also aimed to impose the observance of the legal provisions in the field of setting up of commercial companies. In this new conception, the legislator preserved the preoccupation of saving the company by regulating its creation because the protection of third parties is consistent with a regular company. Nevertheless, in certain cases, the commercial company set up by disregarding the relevant legal provisions

cannot avoid the declaration of its nullity and consequently has to end its activity.

I. The concept of nullity of commercial companies provided by the romanian law and the European Union legislation

The concept of nullity of commercial companies has not a legal definition, and thus, through simultaneous interpretation and corroboration of relevant Romanian and EU legal provisions, we can underline its specificity.

Moreover, the delimitation of the concept of nullity of commercial companies is very important in order to establish correctly its field of application. Otherwise, we can question whether the nullity of commercial companies provided by art. 56 of Law no. 31/1990 (republished) may intervene for any of the cases of nullity of the contracts or only for those expressly mentioned by this legal text.

In this respect, we should mention that in the French legislation, according to art. L235-1 of the French Commercial Code "*the nullity of a commercial company.... can result only from an express provision of this book or from the general provisions regulating the nullity of contracts*". Actually, the French Commercial Code does not contain express provisions concerning the nullity of commercial companies, except for the case (Cozian *et al.*, 2002) of nullity deriving from the lack of publicity formalities.

Within this context, we should emphasize that the Romanian legislator has adopted the opposite conception. In other words, the Romanian law develops a modern concept of nullity, which is not considered anymore just a simple sanction applicable to juridical acts, in order to devoid these acts of any effect that are contrary to the legal provisions in force.

Thus, by affecting directly the existence of the company itself, the nullity becomes a way of sanctioning the creation of a legal person disregarding the imperative provisions of the law. In this respect, through a literally interpretation of art. 56 from Law no. 31/1990 republished, it can be concluded that the nullity of commercial companies incorporated into the Register of Trade can only be declared for the cases expressly mentioned by this legal provision. This is why, it is considered that the art. 56 of Law no. 31/1990 provides a limited enumeration of cases of nullity of commercial companies.

The conception of the Romanian legislator is perfectly compatible with the European Union legislation applicable in this field. Thus, the First Directive of 9th March 1968 in the field of commercial companies (EEC Council Directive no. 68/151/CEE on publicity, social engagements and nullity of commercial companies, published in the Official Journal of the EEC) provides expressly, in its art. 11, that, in order to safeguard the third parties interests in the respect of second paragraph of art. 58 from EEC Treaty, throughout all Member States, the nullity of commercial companies may only be pronounced on the following grounds:

"a) no instrument of constitution was executed or that the rules of preventive control or the requisite legal formalities were not complied with;

b) the objects (It should be understood «activity» – authors' note*) of the company are unlawful or contrary to public policy;*

c) that the instrument of constitution or the statutes do not state the name of the company, the amount of the individual subscriptions of capital, the total amount of the capital subscribed or the objects of the company;

d) failure to comply with the provisions of the national law concerning the minimum amount of capital to be paid up;

e) the incapacity of all the founder members;

f) if contrary to the national law governing the company, the number of founder members is less than two".

The community legislator's aim was to limit as much as possible the cases of nullity of commercial companies, especially for the protection of third parties. This idea resides also in the second paragraph of art. 11, which states that *"Apart from the foregoing grounds of nullity, a company shall not be subject to any cause of non-existence, absolute nullity, relative nullity or declaration of nullity*".

The same effect to the above-mentioned provisions was given by the Court of Justice of the European Communities in its judgment in case no. C-106/1989, Marleasing SA vs. La Comercial International de Alimentation SA (Judgment of the Court from 13th November 1990, Rec. 1990, page I-04135).

Thus, within a reference for a preliminary ruling on the interpretation of art. 11 from the First Community Directive in the field of commercial companies, addressed by a Spanish court of law, the CJEC decided that the national judge is under an obligation to interpret the national law in the light of Community provisions. Therefore, the national judge, first of all, must not pronounce the nullity of a commercial company on other grounds than those expressly stipulated by art. 11 from the First Directive. Moreover, the cases of nullity provided by the directive have to be interpreted in a restrictive manner and therefore the lack of consideration or the illicit consideration of the company's contract cannot be considered as cases of nullity of commercial companies because they are not expressly provided. In this respect, it is not possible to provide an extensive interpretation of the case of nullity related to the object of activity of the company, in order to include the lack of consideration or the illicit consideration of the company contract.

In addition, the CJEC shown that the illicit or contrary to public order nature of the company's object of activity has to be understood as taking into account exclusively the object of activity provided by the constitutive act and not the real activity performed by the company.

This judgment of the CJEC had been criticized by the French doctrine (Cozian and others, 2002) and jurisprudence, mainly because it questions a general principle of

law traditionally applicable - *fraus omnia corrumpit*.

Thus, the French Supreme Court kept its traditional solutions and ruled in 1998, with reference to a company's contract, that "the contract can be annulled for illicit or immoral consideration, even if one of the parties did not know the determinant motive for concluding the company's contract" (Cass, 7th October 1998, published in Dalloz 1998, page 563).

Within this context, we should take into consideration that the Romanian legislator has incorporated into the national law the exact cases of nullity of commercial companies provided by the Community legislation.

Consequently, we question whether it is possible to apply to commercial companies some of the general cases of nullity of juridical acts, such as the absence of consideration or illicit and immoral consideration.

In our opinion, a negative answer to this question cannot be accepted, even if the purpose of the legal rules in force is to create a balance between the protection of third parties' interests, the security of juridical relations, the functions of nullity of juridical acts – in general and the validity conditions of contracts.

Therefore, alongside other Romanian authors (Șcheaua, 2002), we consider that such grounds of nullity, which refer to the constitutive act as a whole, are actually included in the cases provided by art. 56 letter a of Law no. 31/1990 republished. We refer here to the lack of constitutive act.

Although the wording of this provision is deficient, in the Romanian law as well as in the Community legislation, another interpretation cannot be accepted, because it would devoid the legal provision of any effect.

Thus, the lack the constitutive act of the company, as *negotium jure,* as well as *instrumentum,* it is hardly possible to be seen in practice taking into account the procedural requirements of the law for the setting up of a commercial company. Moreover, we underline that the cases of nullity provided by art. 56 of Law no. 31/ 1990 refers to a commercial company which is already incorporated into the Register of Trade.

II. The Romanian legal regime of nullity of commercial companies

First of all and, in the absence of express legal provisions, we will try to qualify the nullity of commercial companies, in order to determine whether the nullity is an absolute or a relative nullity. This qualification leads to important consequences as far as its legal regime is concerned.

Starting from the fact that the absolute nullity can be invoked by anyone, anytime and it sanctions the failure to comply with the legal provisions that protect a general interest, we might conclude that the nullity of commercial companies is an absolute nullity.

The same idea seems to arise through the interpretation of the words of art. 57,

58 and 59 of Law no. 31/1990 republished, where the legislator uses the expression "*declaration* of the company's *nullity*" and not the term "*annulment* of the company", which is usually used in case of relative nullity.

On the other hand, the nullity of commercial companies can be remedied. Thus, in accordance with art. 57 from Law no. 31/1990 republished, the court of law may not declare the nullity of a company if, and the grounds of the nullity are removed until the end of the trial.

Therefore, under the conditions provided by the above-mentioned provision, the nullity of commercial companies may be covered by confirmation and this character refers to the relative nullity and not to the absolute nullity.

Nevertheless, we consider that the nullity of commercial companies is an absolute nullity, with all its effects, but, as an exception to the common law, it is an absolute nullity that may be remedied, under the conditions of the law.

This qualification was also provided by the Romanian jurisprudence (Judgement no. 433/2005 of the Craiova Court of Appeal, Commercial Section, published in the Review of Commercial Law no. 2/2008, page 123). Thus, in relation to the fact that the nullity of commercial companies may be declared anytime, it was stated that "the action for declaring the nullity of commercial companies may be brought anytime because this character derives from the type of nullity, namely absolute nullity, which is determined by the fact that at the setting up moment the legal provisions of public policy have been disregarded and that the law does not provide expressly a term of extinctive prescription".

III. The effects of the nullity of commercial companies

First of all, it should be mention that the nullity of commercial companies does not operate retroactively, but only for the future. Therefore, the provisions of art. 58 from Law no. 31/1990 republished constitute a real exception of the common law of nullity of juridical acts.

Actually, in order to protect the interests of third parties and the security of legal relations, the legislator does not to put into question the acts concluded by the company or its existence before the date on which the judgment declaring the nullity has become irrevocable. Thus, the legislator takes into account that the company acquired its legal personality from the moment of its incorporation. From this moment it existed as a legal entity and it performed an activity, although the legal conditions for its setting up were not fulfilled.

In this sense, according to the provisions of art. 222 from Law no. 31/1990 republished, the declaration of the nullity of the commercial company produces its dissolution and liquidation, which, as a principle, operate only for the future. In addition, we mention that the dissolution and liquidation cases, as well as the nomination of liquidators are performed in accordance to the general provisions of Law

no. 31/1990 republished. By exception, in case that the nullity of the commercial company was pronounced by the Court, the court's judgement appoints the liquidators (art. 58 paragraph 2 from Law no. 31/1990).

Moreover, it should be taken into account the fact that the incorporation (Lupulescu, 2008) of a company in the Register of Trade creates a relative presumption of legality of its setting up.

Indeed, art. 59 of Law no. 31/1990 republished states that "*neither the company nor the associates may oppose the nullity of the company to third persons acting in good faith*". Therefore, the third parties that confided in good faith in the apparent regularity of the company deriving from its incorporation in the Register of Trade are entitled to claim the performance of the acts concluded on behalf of the company. Actually, the juridical doctrine (Șcheaua, 2002) stated that the third parties acting in good faith have two possibilities until the judgment declaring the company's nullity is published in the Official Monitor of Romania. Thus, they may either choose to invoke the nullity of the company or to consider the company in question as legally set up.

Conclusions

The Romanian legal regulation in the field of nullity of commercial companies transposes correctly and completely (at least this time) the Community legislation.

These legal provisions are grounded on the fundamental idea that the nullity of commercial companies is an exceptional situation. This is why, the legislator gives evidently preference to the regularization of the company and the removal of the grounds of nullity.

This solution is also preferred from economic point of view because, although it was set up disregarding the requirements of the law, the commercial company existed and performed an economic activity, which might be even efficient. As a consequence, being viable from economic point of view, there are no reasons for the disappearance of the commercial company, and its irregularities shall be removed. We should mention that, in practice, the legal regulation concerning the nullity of commercial companies has achieved its objective and the courts of law rarely pronounced it.

Nevertheless, we still consider that the legislator should insert within the rules regulating the nullity of commercial company an express provision related to a term of extinctive prescription and its claiming (it can be a short term), even though this nullity is an absolute nullity. As a matter of fact, on one hand, other countries, such as France, had already adopted this solution. According to the French (Cozian and others, 2002) legal provisions, the term of extinctive prescription for declaring the nullity of commercial companies is of three years.

On the other hand, there are already Romanian legal provision establishing cases of absolute nullity, which may be invoked within a specific term of extinctive

prescription. For example, the term of extinctive prescription is of one year, in case of the absolute nullity provided by article 45 paragraph 5 from the Law no. 10/2001 (on the legal regime of certain immovable goods taken abusively by the state between 6th of March 1945 and 22nd December 1989, republished, amended and completed). The grounds, which led the legislator to provide such a regulation, were the same as for the nullity of commercial companies: the protection of third persons contracting in good faith with the company and the security of juridical relations.

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Legea nr. 10/2001 privind regimul juridic al unor bunuri imobile luate abuziv de către stat între 6 martie 1945 și 22 decembrie 1989, republicată, amendată și completată

An Empirical Analysis of Romania's Comovement with the Euro Zone

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Abstract. *In light of adopting the euro in the near future, it is important to asses to which extent the Romanian business cycle evolves in a similar fashion with that of the euro zone. The present study is an empirical investigation of the degree of business cycle synchronization between Romania and the euro area, based on macroeconomic series that capture the cyclical features of the two economies. The results indicate that the most recent period, characterized by major economic and financial turmoil, has lead to an increase of the degree of comovement between of the Romanian economy with that of the euro area.*

Keywords: co-movement; optimum currency area; European integration; cohesion; dynamic correlation.

JEL Codes: E32, F15.
REL Codes: 8H, 20H.

1. Introduction

There is a growing literature that empirically analysis the degree to which the new member states of the European Union have satisfied or currently fulfill the criterion of business cycle synchronization with the euro zone. The problem is important not only for the candidate countries, for which the benefits of euro adoption should outweigh the costs, but also for the well functioning of the union as a whole on the long and medium term.

Sadly, the literature is extremely scarce with respect to empirical studies that focus on Romania. The explanation resides both in the poor quality of available data and in the problematic econometric modeling when tackling transition economies, for which time series are short and institutional changes are frequent. However, there are studies that analyze the Romanian economy from the perspective of business cycle synchronization with the euro area as being part of a group, but they fail to capture the characteristic features of this particular economy.

Savva, Neanidis and Osborn (2007) use a bivariate VAR-GARCH model in order to assess the correlation dynamics between the new member states and the euro zone, taking into consideration a number of countries outside the European Union as well. The obtained results indicate that the degree of comovement with the euro area has exhibited large variations during the period 1980–2006 and for most of the Central and Eastern European countries, the degree of comovement has increased. It is noteworthy the fact that among all the analyzed economies, Romania was the only one at that moment exhibiting a negative correlation with the euro zone for the whole sample. However, the authors find evidence in favor of a structural break in the degree of business cycle synchronization between the candidate countries and the euro area after the completion of the most important negotiation stages for European Union integration. The study reaches the conclusion that after 2002 the correlation coefficient of the Romanian economy with that of the euro area changes from negative to weak positive. Compared to other candidate countries, this coefficient remains low.

A similar approach can be found in Babetskii (2004), who employs time-varying correlation coefficients in order to assess the comovement of supply and demand shocks between a group of candidate countries and other states in the euro zone. The underlying shocks have been isolated based on VAR models with long term restrictions identified as proposed by Blanchard and Quah (1989). As far as supply shocks are concerned, which are crucial for business cycle synchronization, the author points out that the asymmetry between the shocks that affect Romania and the other countries in the European Union hasn't diminished over time.

Other studies that have established a negative correlation between the Romanian business cycle and that of the euro area included: Berger, de Haan and Inklaar (2002) for the period 1990–2001, Furceri and Karras (2006) for the period 1980–2003, Afonso and Furceri (2007) for the period 1995–2005.

The goal of the paper consists in establishing stylized facts referring to business cycle synchronization between Romania and the euro area, more precisely, establishing the way in which macroeconomic correlation has evolved, which is particularly relevant in the perspective of adopting the euro.

We depart from the above mentioned studies by employing dynamic correlation coefficients defined in the frequency domain. We argue that especially in the case of transition economies, dynamic correlation measures are more relevant for assessing business cycle synchronization because the structure of the economy in continually changing, as well as relationships between agents and the degree of financial and economic integration with more developed countries is evolving. Moreover, the current economic context marked by a multi-level crisis triggers profound changes in the macroeconomic variables at a global level. There are empirical studies which bring evidence that periods of financial and economic turbulence lead to a significant increase of correlation coefficients on international markets (for example, Bekaert, Harvey and Ng (2005) or Forbes and Rigobon (2002), Doyle and Faust (2002), Gayer (2007)).

2. Data set and methodology

In order to better grasp the dynamics of the comovement between the Romanian economy and that of the euro area we made use of data that are monthly available, being more suited for a spectral analysis than quarterly data. Moreover, statistical availability is important to characterize the most recent and profound period of economic and financial turmoil.

The series employed to capture the cyclical evolution of the Romanian economy and of the euro zone were taken from the Eurostat database and graphically depicted in the appendix. In order to estimate the degree of business cycle synchronization between the two economies, among all macroeconomic series, we have selected the most representative from this perspective, as follows: the industrial production index (for the time span 2000m1 – 2009m6); the index of production in construction (2000m1 – 2009m6); unemployment rate (2000m1 – 2009m3); harmonized index of consumer prices – *HICP* (2000m1 – 2009m7); the economic sentiment indicator[1] – *ESI* (2000m1 – 2009m4), a forward looking indicator that directly assess agents' expectations regarding the state of the economy for the next twelve months.

The time series that exhibited seasonal patterns were seasonally adjusted using TRAMO/SEATS methodology. In order to capture the cyclical evolution of each economy, the available series were considered as deviation from trend, computed using a Hodrick-Prescott filter. A logarithm was applied on the initial series, in order to obtain the percentage deviation from trend.

Empirical analyses on the degree of business cycle synchronization within a group of countries can be carried out in the time domain or in the frequency domain. The first category has been so far dominant in the comovement literature. Both types of

investigations can be subject to criticism. Spectral analysis can capture facts otherwise not revealed by time domain investigations, such as whether business cycles more are correlated on the short (at higher frequencies) or on the long term (at lower frequencies). Unlike temporal analysis, the spectral one allows a frequency by frequency approach. The static correlation is defined for the whole spectral band, consequently, it eliminates the possibility of focusing on the most dominant frequencies, leaving aside the ones that account for minor economic fluctuations. On the other hand, spectral analysis has its own drawbacks as well, the most important being that it doesn't capture time variations of the time series behavior.

In order to eliminate these shortcomings, the present study combines spectral analysis with the temporal one. To this respect, we'll make use of two dynamic correlation measure defined in the frequency domain, namely coherence and the dynamic correlation coefficient proposed by Croux, Forni and Reichlin (2001). These measures are being attached a time dimension by computing them period by period, based on a predefined rolling window. Similar investigations have been made by Eickmeier and Breitung (2006), Aarle, Kappler et al. (2008), without attaching the time dimension to the dynamic correlation measures; this is done, for example, by Essaadi and Boutahar (2008).

In the frequency domain, time series are considered as aggregating an infinite number of components with different periods and amplitudes. The properties of a stationary stochastic process are captured by applying a Fourier transform to the autocovariances. The spectrum of the series is obtained, as follows:

$$S_x(\omega) = \frac{1}{2\pi} \sum_{j=-\infty}^{\infty} e^{-i\omega j} \times \gamma_x(j) \qquad (1)$$

where $S_x(\omega)$ is the power spectral density of process x for the frequnecy expressed in radians; $i = \sqrt{-1}$ and is the autocovariance function of process x for the j lag. The spectrum contains the same information as the autocavariance function, but presented in a different manner. The power spectral density has been estimated through Welch's averaged, modified periodogram method.

The first correlation measure employed to analyze the interdependencies between the Romanian economy and that of the euro area is coherence, which is estimated according to the following relation:

$$C_{xy}(\omega) = \frac{\left|S_{x,y}(\omega)\right|^2}{S_x(\omega) \times S_y(\omega)} \qquad (2)$$

where $C_{xy}(\omega)$ is the coherence between signals x and y for frequency ω, $S_{x,y}(\omega)$ is the co-spectrum between series x and y, $S_x(\omega)$ is the series x spectrum and $S_y(\omega)$ is the series y spectrum.

The coherence measure establishes how well signal x corresponds to signal y for each frequency. It belongs to the interval $(0,1)$ and it has the drawback that it doesn't take into consideration any faze differencies among the two business cycles.

Frequency domain analysis enables taking into consideration only dominant frequency, leaving aside the ones that

explain only a minor fraction in the business cycle evolution. To this respect, we compute the mean coherence ($\overline{C}_{xy}$), according to the following relation:

$$\overline{C}_{xy} = \frac{\sum_{\min(\omega_{mx},\omega_{my})}^{\max(\omega_{mx},\omega_{my})} C_{xy}(\omega)}{\max(\omega_{mx},\omega_{my}) - \min(\omega_{mx},\omega_{my}) + 1} \quad (3)$$

where stand for the frequency for which the spectrum of series *x* and *y*, respectively, have a peak.

Similar to the mean coherence, we define the mean dynamic correlation ($\overline{\rho}_{xy}$) based on the indicator proposed by Croux, Forni and Reichlin (2001), according to the following relation:

$$\overline{\rho}_{xy} = \frac{\sum_{\min(\omega_{mx},\omega_{my})}^{\max(\omega_{mx},\omega_{my})} \rho_{xy}(\omega)}{\max(\omega_{mx},\omega_{my}) - \min(\omega_{mx},\omega_{my}) + 1} \quad (4)$$

where:

$$\rho_{xy}(\omega) = \frac{real(S_{xy}(\omega))}{\sqrt{S_x(\omega) \times S_y(\omega)}} \quad (5)$$

Unlike the mean coherence, the dynamic correlation measure given by relation 5 takes into account the faze differences between the two business cycles. This indicator belongs to the interval $(-1,1)$. Croux, Forni and Reichlin (2001) argue that this correlation measure is an appropriate method to study the comovement between two economies, it allows disentangling the long-term correlation from the short-term one. Based on this indicator, the authors propose a cohesion measure among a group of countries as the simple arithmetic mean of the dynamic bivariate correlation coefficient computed for all pairs of two countries for a certain frequency band or for the whole band.

The two mean correlation measures have been attached a time dimension by computing them on a 8 year rolling window, a period that characterizes the business cycle length.

3. Results and their interpretation

The series employed for measuring the interdependencies between the Romanian economy and that of the euro area indicate the fact that there is a powerful correlation between the chosen economic variables for the dominant frequencies of the business cycle. Figure 1 illustrates the evolution of the two correlation measure, where the mean coherence is displayed against the left axis, and the mean dynamic correlation is drawn against the right axis.

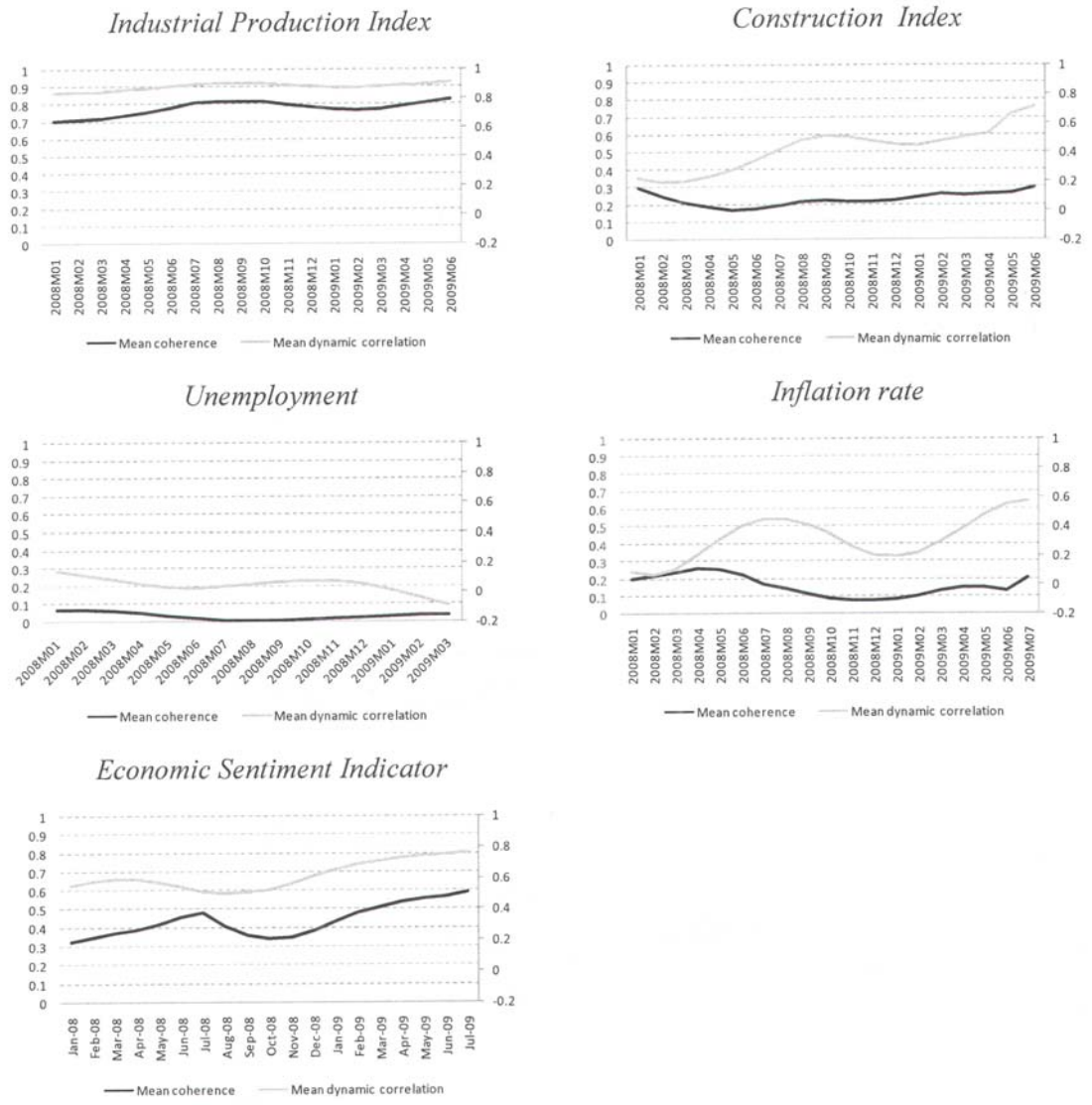

Figure 1. *Evolution of dynamic correlation measures between the Romanian economy and that of the euro zone computed with a 8 year rolling window*

A first conclusion that can be drawn based on the visual inspection of the correlation measures is that the most powerful correlation is attained for the industrial production index. The mean coherence belongs to the interval (0.70; 0.83), whereas the mean dynamic correlation measure varies in the interval (0.84; 0.91). This can be explained through a high dependency of the Romanian industry of the import goods, but also of export orders for the domestic industrial goods.

The lowest correlation is achieved with respect to the unemployment rate, for which the mean coherence belongs to the interval (0.03; 0.06) and the mean dynamic correlation ranges within the interval (-0.09; 0.13). Basically, for this particular indicator, an analysis of the correlation trend is irrelevant, as the correlation is not statistically significant. The explanation

resides in the labor market conditions, which are different in Romania as compared to the euro zone; the labor unit cost constantly rose in Romania over the studied period (even in 2008Q4. Compared to the previous quarter, the total labor unit cost rose 4.7%), which limited the number of unemployed. Moreover, the characteristics of the Romanian economy as a developing country lead to different needs on the labor market as opposed to the mature economies in the euro zone.

These differences also explain the evolution of correlation in the construction sector. The correlation became more powerful starting with may 2008, when the pace of production slowed in Romania, as well.

As far as the economic sentiment indicator gap, it can be regarded as a composite measure that characterizes the evolution of the economy as a whole and can be considered a proxy for the business cycle extracted from the GDP. The computed correlation measures indicate a strong interdependence for this indicator and exhibits an ascending trend, especially starting with the fourth quarter of the year 2008, when Romania recorded a negative rate of economic growth, similar to the conditions in the euro area.

The results obtained in the present study are according to those suggested by De Haan, Inklaar and Jong-a-Pin (2005). The authors review the most relevant empirical studies related to business cycle synchronization and draw attention on the fact that high correlation periods and small correlation periods tend to alternate, with respect to the business cycle faze. Correlations are higher during recessions.

A simple statistical test for assessing the trend of correlation measures and indirectly, for the convergence of the two economies, is based on estimating the following regression:

$$\text{Correlation measure}_t = \text{const} + c_1 \times @trend + \varepsilon_t \quad (6)$$

If $c_1 > 0$ and the trend coefficient is statistically significant, this indicates that the underlying correlation measure has increased in the analyzed period and if $c_1 < 0$, the trend has been descending. The table below presents the results of the convergence test for all variables considered for characterizing the business cycle for the two correlation measures: 1 – mean coherence and 2 – mean dynamic correlation. The equations have been estimated using OLS.

Correlation measures against a deterministic trend

Table 1

	Correlation measure	Coefficient	Standard error	t-Statistic	Prob.
Industrial Production Index	1	0.0050	0.0013	3.8103	0.0015
	2	0.0029	0.0007	3.8820	0.0013
Construction Index	1	0.0032	0.0016	1.9926	0.0637
	2	0.0260	0.0028	9.2826	0.0000
Inflation rate	1	-0.0060	0.0022	-2.7063	0.0150
	2	0.0168	0.0050	3.3549	0.0038
Economic Sentiment Indicator	1	0.0117	0.0023	5.1489	0.0001
	2	0.0126	0.0024	5.2356	0.0001

For all the considered variables, the correlation measures exhibit an ascending trend in the period January 2008 – July 2009, a trend which is statistically significant for a p-value of 10%. An exception is given by the mean coherence for the inflation rate, but this is rising starting with the last quarter of 2008, when Romania experienced a negative economic growth, similar to what was happening in the euro zone. From the business cycle synchronization perspective, we consider that the industrial production index and the economic sentiment indicator are particularly important, both being strongly correlated at the end of the sample.

4. Conclusions

During the period January 2008 – July 2009 the Romanian business cycle became strongly synchronized with that of the euro area, which can be mainly attributed to the global economic and financial crisis. The upward trend of the correlation is particularly significant starting with the fourth quarter of the year 2008, when the effects of the international crisis triggered a negative rate of economic growth in Romania as well. The results confirm the findings of empirical studies that analyze crisis periods and find that these episodes lead to an increase of correlations on all markets.

The theory of optimum currency areas draws attention to the analysis of asymmetric shocks, that affect certain countries or regions within the union and trigger significant cost generated by the adoption of a common currency. According to this theory, the optimum dimension of a monetary union – the optimum border of a common monetary area – corresponds to a situation in which the costs and benefits of using the same currency compensate each other.

In light of adopting the euro, the increase of the degree of business cycle synchronization is in line with the theory of optimum currency areas, according to which the higher the degree of business cycle synchronization with the rest of the union, the smaller the cost associated with giving up the national currency.

The euro adoption will generate permanent benefits for Romania, but this decision will not be cost free. The immediate effects will be eliminating the transaction costs and the exchange rate risk, the increase of investment, of macroeconomic credibility that will diminish country risk. Moreover, the euro adoption will foster financial integration with the European market, which can improve financing conditions of Romanian companies.

Entering the common currency area will also generate costs due to the loss of monetary policy autonomy, more precisely, the interest rate and flexible exchange rate policy, will no longer be used to smooth out economic fluctuations that appear as a result of shock that hit the Romanian economy. The magnitude of these costs depends on the vulnerabilities of the Romanian economy to asymmetric shocks. The most important indicator that assesses these vulnerabilities is the degree of business cycle synchronization with the euro area. According to the present study, this degree is sufficiently high for the Romanian economy.

Note

(1) The indicator is computed by the European Commission. More precisely, ESI is a composite index whose value is determined based on four confidence indices that are attached different weights: an indicator for the confidence in the industrial sector (which bears a weight of 40%), a consumer sentiment indicator (with a weight of 20%), a construction confidence index (20%) and a retail sector confidence indicator (20%). ESI aggregates the attitudes and judgments of a large number of economic agents (68,000 firms and 27,000 consumers) and according to European Commission statements, is being used in short term analyses. Also, ESI is extremely useful in predicting the turning points of the business cycle.

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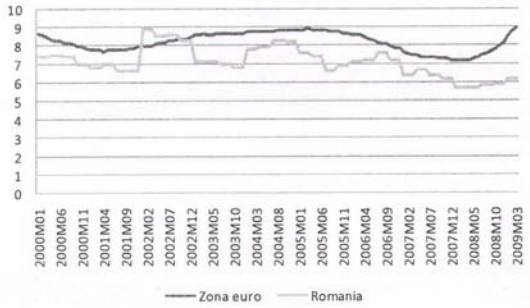
Appendix. Data series

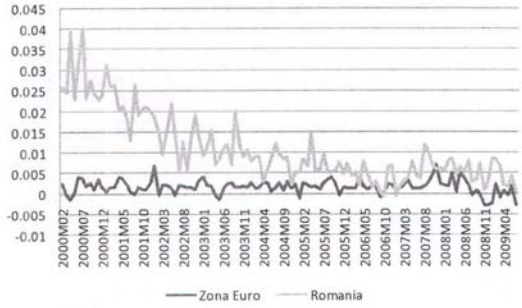
Industrial Production Index (2005=100)

Construction Index (2005=100)

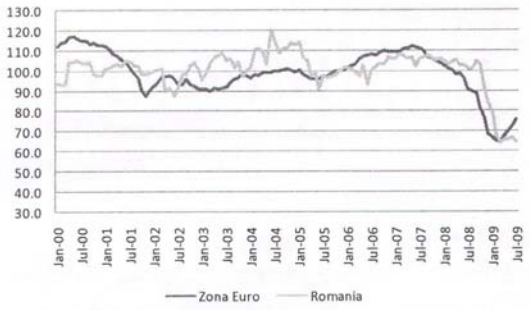
Unemployment Rate



Inflation Rate (based on HICP)



Economic Sentiment Indicator



The Operational Risk – Comparative Analysis

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Abstract. *In many cases operational risks tend to be underestimated, considering that the losses they cause are generally minor can't threatening the survival of a bank. Losses resulting from these events come from a complex interaction between organizational factors, personal and market that do not fit into a simple classification scheme. Observing what happened in the past we can say that operational risk is an important question of the financial losses in the banking sector.*

Keywords: operational risk; BIA; SA; AMA; LDA; IMA.

JEL Codes: G21, G32.
REL Codes: 11C, 11E.

Today, as states and Radu Ghețea "Operational risk should receive increased attention because we have 40 banks. Each tries to grab a market share higher. In this situation, operational risk has increased greatly".

Such operational risks may materialize in potential financial losses, other than those due to market risk of the credit or strategic, because the occurrence of internal or external events, or because of changes and trends that have not been detected and prevented by corporate governance and internal control systems, policies, organization, ethical standards or other control elements and standards of the firm.

Costs of operational risk, relating to the reduction, establishing and maintaining a system of protection through insurance etc., are considered by most financial institutions costs of activities which support is obtained from current revenues. Thus adopting the management of operational risk effectively reduces the amount that will have to take the form of reserves.

Adopting models of quantification of operational risks financial institutions can benefit from a number of advantages, such as incorporating quantitative risk reduction in the decision process, the allocation of capital for operational risk dimensions, provided the framework for modeling extreme losses, are encouraged to measure and management of this risk are identified sources and losses of this type of risk, although the experience does not allow quantification, the development of modeling techniques to operational risk were encouraged to adopt a method of quantification of operational risk.

To determine the necessary capital to cover losses from operational risk were the three methods proposed by the Basle Committee, namely: Basic Indicator Approach (BIA), Standardized Approach (SA) and Advanced Approach (AMA), the two institutions credit in Romania[1], in order to verify the hypothesis that capital requirements associated decreases operational risk by using a more advanced method.

Synthesized three methods for determining the capital requirement for operational risk for the credit institution X, and as indicated in Figure 1, we find that the assumption made above is fulfilled only for a level of confidence of 95%. Thus we can consider whether assumptions on which model we advanced (LDA - Approach Loss Distribution), taking into account that no data were available only at the aggregate level, there was just right, whether it does, the level recommended by the Basel is too strict.

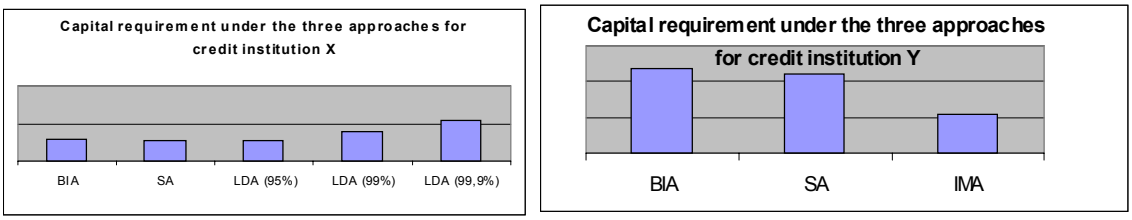

Figure 1. *The requirement of capital to cover operational risk*

Source: Own processing.

The analysis for the credit institution Y, which can be seen from Figure 1, reveals that once the bank uses a means of measuring the more complex operational risk, capital requirement related to this risk is diminishing. Thus the minimum capital mobilized using Internal Assessment Approach (IMA), as it can identify, measure and more effectively manage operational risks are able to discover what business line is a higher operational risk and which are the most important risk factors.

Comparing the capital requirements determined by the first two methods, there is a diminution of it, explained that the standard approach assumes a different proportion of the capital required on business lines, and the main activity of the institutions is the retail rate for weighting is 12%, unlike 15% for Basic Indicator Approach. But the loss of operational risk using standardized is not significant, and as a result of analysis performed on the two credit institutions, although it is considered that the differentiation business line is a big step in increasing sensitivity calculating capital requirement.

In time, the method of applying the Basic Indicator and standardized methods in practice, to see that between the capital and operational risk can not establish a clear relationship, found in some cases that limit is costly, if capital which will result in excessive failure rate of return on capital are some situations where it is scarce, which exposes the inadequacy of capital for credit risk, in cases where financial institutions are exposed to significant risks, because not determine the exact losses for operational risk. Increasing capital no means necessarily a health of the credit institution whose survival depends on the profitability of business performance, and not an anticipated risk management and control arrangement of operational risk events.

The advantage of these methods is given by insurance against expected and unexpected losses arising from operational risk by calculating a minimum level of capital allocated to this category of risk, and that the institution has created a department of operational risk that has the task to monitor and collect events operational risk and create a database which provides reports on this type of risk.

Given that a large financial institution generates a higher income than any other institution of a smaller size, the first will be forced, under the basic indicator approach and a standardized approach, to allocate more capital related to operational risk. While the institutions of higher dimensions have more opportunities to diversify risk geographically, by product or industry, whose profits are also not recognized by the Basel Committee, which will lead to the assumption of higher risks due to the raised requirement capital.

Such financial institutions have paid a high attention to operational risk events with the mitigation measures for them: insurance departments involved in training activities exposed to operational risk, the adequacy of the normative documents according to regulations and market conditions; involved departments collect and report department operational risk events resulting in loss; staff training to reduce operating errors, systems development and strengthening of bank

security, evaluation of the methods of reducing risk in terms of costs and benefits of checking utility method risk reduction, using methods of risk reduction (insurance policies, or outsourcing of activities), correct use of tools for managing the operational risk (risk assessments, scenarios of loss and control, indicators of risk and immediate corrective measures, reporting information on monitoring operational risk); updating continuity plans, evaluation and testing them regularly.

Thus many analysts consider that the two methods of determining the capital requirement for operational risk, the basic and standardized, is insufficient given that institutions can use to demonstrate the key risk factors faced in the operational risk and at the same time can not build a culture of risk appropriate.

It can highlight a number of proposals that would help the institution in question, namely: level departments to identify the alarm signals (staff turnover, inadequate training of employees, etc.) to practice a prudent policy in human resources (achieved through competitive employment, providing legal number of days of leave, follow the materials of the employees, the migration of staff from one department to another with all the responsibilities of teaching, etc.), conduct physical checks (cash, checking signatures and documents, careful preparation sales team, correction of labor standards, etc.) security and guarding buildings (access procedures in different locations of buildings, securing jobs involving cash, safe storage and confidentiality of documents, etc.) existing staff in compartment of security and safety, system protection systems that are changing passwords regularly protected against intrusion from outside, and the possibility of data recovery in case of failures, a quantitative assessment of operational risk in each transaction, activity, product; operational risk management is performed each compartment and territorial unit ensuring the maximum efficiency and decentralization of the internal control structures across all the bank, there is an internal focus in particular on sensitive locations, through spot checks (by the way recovery of outstanding debts, mail their-nostrum accounts, circuit documents, registration documents etc.) overall strategy of the institution to be consistent with models of quantification of operational risk, in case of emergency, strategic operations for reopening must be a back-up of IT systems, the database contains information on the loss for at least the past 5 years, in order to determine losses from operational risk, regular testing of the IT system to be adapted to requirements.

To the credit institution X, taking into account the hypotheses assumed, there is a requirement of capital adequacy to cover higher losses related to operational risk that takes into account the risk profile and ability to identify, measure, monitor and control risks level.

Experience of credit institutions (Berg-Yuen, Medova, 2004) shows that the capital requirement determined by the method is more advanced than what is based on a standard method or a basic result obtained in the case of the credit institution X. While in the case of methods advanced credit institution may also benefit from insurance

discount, there are sufficient incentives to encourage banks to use the advanced approaches for determining capital requirements. This may be due to inaccuracies in the assumptions made as operational risks are not yet well inventoried, unmaking subject of historical records of events and their consequences, although an audience big enough and there is concern for proper management. This is due in particular to the lack of data which depends very much on the human factor which must report events involving material or immaterial loss on the institution concerned has suffered. Such employees are out to make such reports as may prevent such events would be a task of service, or fraud if the information is valid after the event, or many other reasons. It also must be taken when this type of quantification of risk and risk events with low frequency and potential major impact, so as to meet the requirement of a confidence interval of 99.9% for a time horizon of a an information unhealed the institution concerned when providing the data needed study. These are just some of the reasons that have not been expected results.

The second credit institution has a clear vision and specific events causing the loss caused by operational risk and allocate capital based on those losses actually saving capital and retaining customers, thus providing a much better picture on the Romanian market.

Thus we suggest that financial institutions as the first step that should make for measurement operational risk is to do an inventory by category and the creation of methodologies to identify, plan and avoid these risks and devising plans for crisis and remedying the effects of this event risk.

By using advanced methods, credit institutions can identify operations challenging operational loss, and thus demonstrate progress in the management of such risk. But until such methods must demonstrate to the supervisory authority that have complete databases and well-documented, and in certain situations and they must have additional funds to be able to invest significant amounts of money in a process operational risk management.

Because the application of these methods of quantification of operational risk there were observed a number of issues such as the emergence of tensions due to the identification of operational losses (to obtain values for different indicators because the accounting standards and practices vary from country to country; lack of regulations on the inclusion or exclusion of some losses in the calculation of capital required, the allocation of losses to different types of risks is difficult), consistency, relevance and subjectivity estimates depend on the frequency and impact of loss-generating events, as while quantitative methods are applied on irrelevant data, poor quality or too expensive.

Thus we can say that the methods of quantification of operational risk proposed by the Basel Committee present a number of shortcomings which result in a default measurement incorrect for this type of risk.

Setting the real optimum capitalization of financial institutions of special importance by allowing capital to meet the operational function of protection, which involves the absorption time of any loss contingencies

that may occur during the course of which will allow a reduction the probability of bankruptcy of the bank and increase the degree of implicit trust of the population in the national banking system.

The new agreement is likely to establish discrimination to the economic-financial nature between large banks (which have sufficient funds for the design and implementation of internal models of complex and effective risk assessment) and smaller, what experience turn on structure of national banking systems by increasing the concentration of banking (encouraging mergers and acquisitions in the banking and financial) with all the complex factors that it entails, namely: reduction and the competitiveness of the large banks of monopoly positions regarding the imposition of prices of banking services.

Note

(1) For reasons of privacy compliance, we will not specify the identity of their name and we will continue to name them: a) the credit institution that uses X, standardized methods for quantification of operational risk, although the group to which the model uses an internal, due to lack of historical data necessary for carrying out the relevant scenarios and measurement indicators relevant in determining the depreciation losses, offering and that within two years to move to an advanced model. b) the credit institution Y which has adopted an advanced model for measuring operational risk which is aimed at locating potential risks to the goods and/or support activities, in order to estimate the potential impact.

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The End of Certainty in the Complexity of New Economy

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Abstract. *In their transition through life, the generations of the common living whole inevitably coexist and succeed one another. On the way of sense evolution, we find ourselves between the usual certainties, that we wish for or not, such as changes, belief in hope, death, and the uncertainties that offer motivation for knowledge and its transformations in wisdom, from the perspective of the common living whole. The end of certainty without excluding change, hope and death, as expressions of the intelligence of the common living whole, brings to the plan of coexistence and succession of generations the uncertainties of sense evolution, as defining elements of a complexity that opens itself constantly, to increasing interdependences of the type "entire integrated", of a spirituality that confers the awareness of harmony. In the world of uncertainties of sense, the responsibility of assuming the freedom of being an organic part of an "integrated system" becomes the fundamental value on which we build the harmony between science and faith – as organic sides, yet interdependent of the spirit that defines the energy to walk the road.*

Keywords: open complexity; sense uncertainty; the common living whole; spiritual responsibility.

JEL Codes: I31, J17.
REL Codes: 5F, 12C.

In their transition through life, human individuals coexist and succeed each other, complying with a law that is as natural as the gravitation law. Between the two unique irreversible moments, birth and death, one goes through normal evolutions of sense, desirable or not.

The transition from childhood to active maturity in life is a normal desirable evolution, the same as the transition towards the end of life is normal and undesirable. Not to mention the fact that nobody wants to leave this life, exit representing another natural, yet undesirable sense (Figure 1).

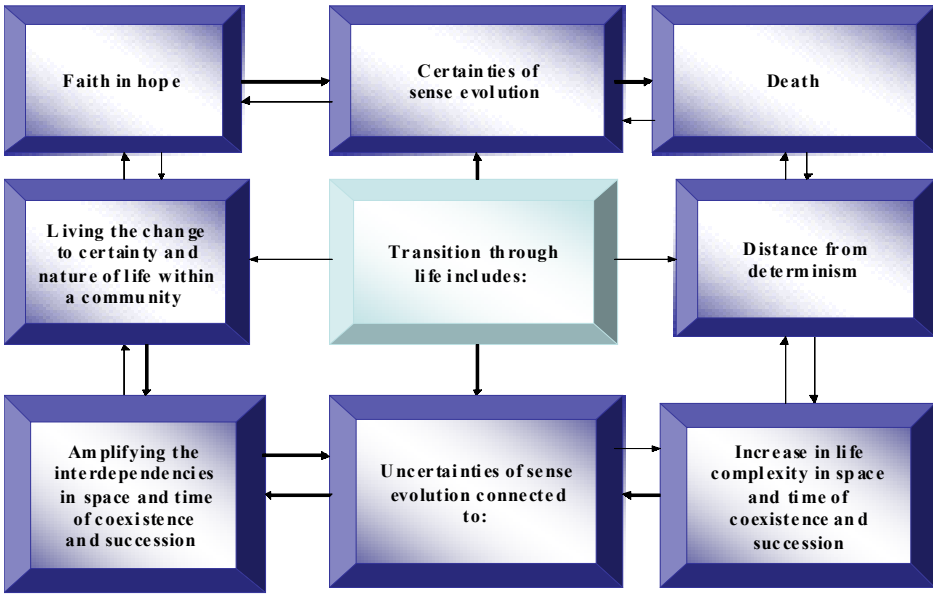

Figure 1. *Life between certainty and uncertainty*

On this road of normal desirable and undesirable evolution it seems that the uncertainties dominate, even in the "clear" certainty situations. In our opinion, certainties are those human behaviours that accompany normal desirable or undesirable evolutions in our transition through life.

According to Orio Giarini and W. R. Stahel (1996, p. 315), apparently death is the first certainty of our sense evolution, if we consider that, after we are born, we know for certain that we are going "in one direction only – to exit from life". "The beauty" of this natural certainty in our transition through life is that we do not know from the start when it occurs. Let us imagine what could happen to our behaviour if we received along with our Birth Certificate the Exit one as well! We cannot tell whether the process of knowing the human being will arrive to discover the production moment of this normal, yet undesirable, certainty, and what could happen to our behaviour if we knew for sure the exact moment of our exit from life!

The fact that the fulfilment of this certainty of the transition through life is performed in uncertainty conditions generates the second certainty in our

evolution: faith in the certainty of hope. While the first certainty comes from the evolution of human biology, the second one springs from the spirituality of human being, hope being the motivation of sense rationality.

For every being and their community, faith in the certainty of hope is the result of the fact that "the labour of hope is not one of giving up, as it implicitly involves success and not failure"[1].

Assuming success, not failure, hope fulfils our transition through life, determining a proactive attitude, far superior to "the art" of leaving your trace on the ground in vain, to accept whatever comes down on you, fostering the feeling of greatness in the fight with fear, placing ourselves above fear.

By this generating force of energy in search of the desired optimum, hope accompanies people, supports them through the hard times of the transition through life and shapes a new image of the personal – integral environment where they want to live, work and love – the imperatives of human life in society, as shown in Figure 2 (Adler, 1995, p. 34).

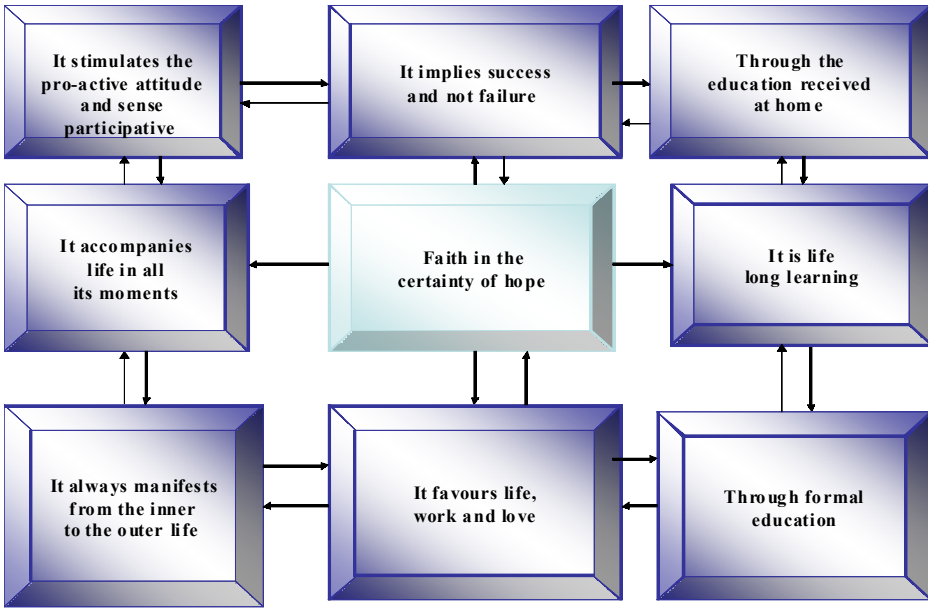

Figure 2. *Biology of hope in transition through human life*

If every being learns to hope, it means that the community he/she is part of consciously integrates the strength of the force that connects it to a better wait, such a process starting inside the human being and evolving towards the outside. As Stephen R. Covey said (1996, p. 19), the true change, namely the normal desirable change, of sense always takes place from our inside towards the outside, it is the result of the paradigms that we understand and according to which we rapport ourselves to the world where we live, work and love.

From the perspective of the new paradigm, that we called the "health of the common living whole" (Popescu, 2006, pp. 33-42) change inside the life, individually and socially, is a complex process, known as human respiritualisation that has as supreme appreciation value the manner in which it contributes to the health of people, institutions, environment, communities, families, and organisations (see also Figure 3).

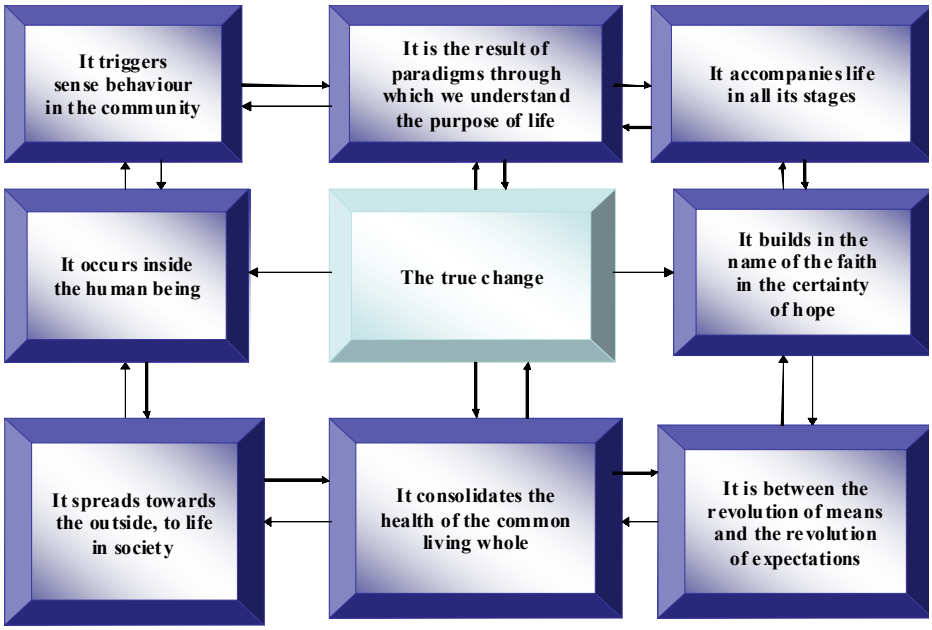

Figure 3. *The spirit of change of sense*

Nowadays, according to some humanistic scholars, the world distances itself from determinism, and the interdependencies of the life we live in, where we work and love, open towards the limits of space in the time that our microcosm allows us, complexity becoming the spiritual form where uncertainties play the game of institutional hope world wide[2].

On this road of evolution of sense, the spirit of certainty actually means the gradual transition to the era of responsibility for the use of scientific knowledge and life experience to control the risk of our choices in conditions of uncertainty (Popescu, 2006, pp. 124-133).

The more we "love" the uncertainties of evolution of sense, the more we need to use our knowledge and experience for the health of the common living whole.

Unfortunately, evolution up to this point has used scientific knowledge and life experience to accomplish a progress that endangers the health of the common living whole[3], starting with the health of environment and communities and carrying on with the health of families and democratic institutions that seek to keep in balance our common advancement.

In his famous speech on monetary George Wold, an American biologist, laureate of Nobel Prize for philosophy and medicine in 1967, stated that a society dominated by the military side is a society centred on death. In this sense he emphasised that "we, the biologists, have reached a point where we have admirable knowledge of the way our nerves work, and the military forces have used our knowledge to produce neuro- paralysing toxic substances. We have admirable knowledge on the nature of diseases, particularly infectious diseases; the military forces have used this knowledge to master the instruments of bacteriological war.

We reached admirable knowledge of plant life; on their account, military forces have created defoliants. We unshackled hidden atomic energies to raise the standard of living and to put an end to hard work. Using this knowledge the military forces made atomic and hydrogen bombs capable of destroying all humankind. This is what makes of a society centred on army forces a death centred one, marching towards perish"[4].

The new economy is, in our opinion, a challenging spirit of a paradigm that intends

to reach the necessary harmony between "revolution of means" and "revolution of expectations" from the perspective of the health of the living whole. In fact, the needed harmony between "revolution of means" and "revolution of expectations" is nothing but the supreme value of the evolution of sense of our microcosm in the quantum physics vision, known as the "harmony at the level of the common living whole".(5)

The spirit of this harmony is, in fact, the energy of the balance of our common evolution or our God.

Harmony, as state of development of the parties, from the perspective of the health of the common living whole, demands that we place knowledge and life experience on the stave of fight with opening the complexity of economic, socio-human life, the use of the "revolution of means" for a progress triggered by selfishness and greed and far from its requirements to be, as living spirituality in a world of bio-socio-diversity that forms the very balance between coexistence and succession of evolution (see also Figure 4).

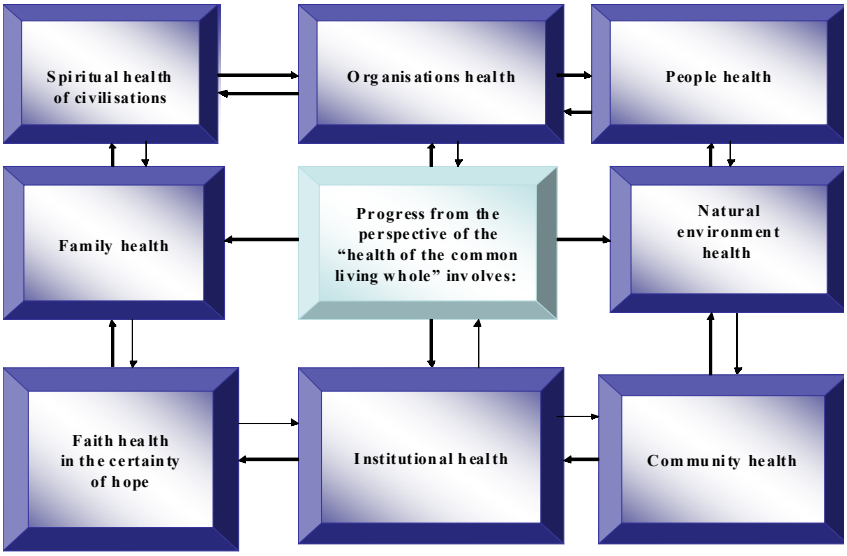

Figure 4. *Progress health from the perspective of the common living whole*

The world we live in means the end of certainty that science, knowledge and life experience automatically solve, without saying, the issues raised by evolution based on uncertainties at the level of the common living whole.

According to the new paradigm, human being health has an organic link with environment health, placing their mark on the health of human communities, families, organizations and institutions.

Understanding that transition to the era of responsibility for the use of knowledge and life experience from the perspective of the health of the common living whole is demanded by the end of certainties and the passage to the holistic pluralist truth, as a way to proactively reach out the spirit of "harmony" in the common living whole. This is the key to respirituality of science and faith in the certainty of hope for humankind, an organic part of the living health.

We cannot have healthy people in a sick environment, in sick economies and communities, in organizations driven solely by the amount of financial profit, in an institutional environment in which the rules

of "to have" are dominant, compared to those of "to be", in families where education and hope for tomorrow are left to chance. The end of certainty means the beginning of the moment of paradigm change that transforms love and knowledge under the vital conditions of the necessary harmony for the competition with ourselves in the space and time of coexistence and succession of generations.

It seems that such a comprehensive paradigm, says Stanislav Grof (2009, p. 121) – able to accommodate diversity and to synthesize all data from relativistic-quantum physics, systems theory, research on consciousness and neurophysiology, and the Eastern and ancient spiritual philosophies, shamanism, aboriginal rites and practice of healing – will be complementary dichotomies involving three different levels: the cosmos, the individual and the brain.

In the same spirit, Ilya Prigogine (1996, p. 42) reached the conclusion that distancing from certainty, from the conclusions of the old paradigm means understanding that the Universe where we coexist and succeed is the common living whole, a single living organism of reciprocal interdependent processes. Understanding the value of uncertainty in the world we live, work and love situates our actions and decisions in the real world and not in an ideal, deterministic one.

Only under the conditions of uncertainty love and recognition make sense, the first helps us fulfil our lives as "entire integrated", the second confers the needed wisdom "to be" in a world where we coexist and succeed one another beyond doubt.

Notes

(1) Encyclopedia of Philosophy and Humanities, All Educational Publishing House, Bucharest, 2004, p.1039.

(2) In the Foreword to The Limits of Certainty, Alexander King emphasized that 'Contemporary world is characterised by complexity, uncertainty and rapid change, while at intellectual level we face a distancing from determinism' in Orio Giarini, Walter R. Stahel, The Limits of Certainty, Edimpress-Camro Publishing House, Bucharest, 1996, p. 43.

(3) See Pope John Paul the Second, Encyclicals (in Ro: Enciclice), ARCB Publishing House, Bucharest, 2008.

(4) Quotation after Albert Szent-Györgyi, Plea for Life (in Ro: Pledoarie pentru viață), Bucharest, Political Publishing House, 1981, p. 175.

(5) See Fritjof Capra. The Moment of Truth (in Ro: Momentul adevărului), Bucharest, Technical Publishing House, 2004, p. 358.

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Increasing Responsibility towards Environment

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Abstract. *In the international climate of the early millennium, the need for reconciliation between economic and social development, on one hand, and the environment, on the other hand, is essential. Therefore, sustainable development must be promoted, because it integrates economic growth, improved quality of life, health, education, social development and environmental protection.*

Environmental issues are particularly complex as their causes are interdependent. This requires actions at all levels: local, national, regional as well as at the European Union level, each with its own role in increasing responsibility for the environmental protection.

It is widely recognized that to obtain successful results an integrated approach has to be used to manage the environment, by adopting long-term strategies and action plans. It requires a detailed analysis of the links between different policies and responsibilities, including the links between different administrative levels.

Keywords: environment; responsible involvement; sustainable development; integrated approach.

JEL Codes: L31, Q53, Q56, Q58.
REL Codes: 8E, 15C, 15D, 16C, 20I.

1. Contradictory effects of technology on the environment

Until recently, renewable natural resources were considered to be sufficient for the human needs. Nowadays, following the demographic growth and the unprecedented development of all areas of activity, the need of raw materials and energy for the production of goods grew more and the intensive exploitation of land resources reveals, more obviously, ecological imbalances.

Improving and upgrading technological processes by using the latest scientific achievements have greatly reduced specific consumption of raw materials, but not of energy. As a result of industrialization and production of goods development, the number and the quantity of materials affecting the environment have further increased.

1.1. Environmental pressure

More and more often, some raw materials, intermediary or processed products, some of them particularly complex, are found in air, water and soil (EEA, 2008). Acid rains are relatively common, determined by the presence of sulfur dioxide in the air, caused by thermal process development and use of inferior fuel. Discharged into the atmosphere, important amounts of nitrogen, carbon oxides and others substances produce adverse effects on vegetation, in general, and directly or indirectly on human beings.

Studies conducted by Blacksmith Institute show that 600 million people, mostly from developing countries, will die prematurely from exposure to industrial waste (Blacksmith Institute, 2009).

Mines, battery recycle centers or these for treatment of animal skin are often areas with extreme toxicity in developing countries. Chemicals found here cause retardation for children and cancer.

At the beginning of the millennium, the world is in ferment. Changes that have taken place will create, in an optimistic vision, hopes for remedy of the environment, albeit a gradual one.

Natural environment – i.e. air, water, soil and underground, life forms that those ecosystems create and support – is the most common image that the ordinary man has when talking about the environment.

However, today, the environment is a multidimensional reality that includes not only the natural environment, but also business and human creations. It is occupying a double position, namely: the "component" of the environment and the "consumer/beneficiary" of it.

The current concept of environment is a dynamic one, which seeks to define, analyze and monitor the functioning of protected systems in all their complexity.

The natural resources mean all natural elements of the environment that can be used in human activity:

- Non-renewable resources – minerals and fossil fuels;

- Renewable resources – water, air, soil, flora, fauna;
- Permanent resources – solar, wind, geothermal and wave.

Any environment protection activity is aims not only at the rational use of these resources, but equally the correlation of the territorial systematization with measures to protect natural factors; the adoption of less polluting production technologies; the equipment of technology installations and polluting transport means, with special devices, in order to prevent harmful effects on the environment; the/recuperation and the best use of residual substances.

Most of the economic growth is based not on renewable sources of energy, but on fossil fuel energy: coal, oil, natural gas.

Residuals resulting from human activities have taken worrying proportions. Air pollution and water degradation damage to the ozone layer, desertification, toxic and radioactive waste – through their accumulation – all altered the quality of the environment. They generate imbalances in fauna and flora; they affect the health and life of human communities, especially in large urban agglomerations.

1.2. Environmental quality

Daedalus Consulting has developed in partnership with Green Report, the first quantitative research on environmental issues in Romania (Daedalus Consulting, 2008). The survey, published in February 2008, was conducted on a sample of 1003 respondents.

As factors that heavily impact on the environment, Romanians identify air pollution (84.3%), deforestation (84.1%), genetically modified food (77.3%), industrial pollution, droughts and floods or thinning of the ozone layer (over 72%).

These are phenomena with direct consequences for everyday life, perceived as such by the subjects. Depletion of fossil fuels (55.7%) does not create great concern, since it is looked at as something that will happen rather far in the future.

Environment represents an essential element of human existence and is the result of the interference of natural elements – soil, air, water, climate, biosphere – with elements created by human activity. All of them interact, influencing the conditions and possibilities for future society development.

Any human activity and hence the existence of the individual is inconceivable outside the environment. Therefore, its overall quality and the quality of each component put their imprint on the human being.

The set of relationships and exchanges established between man and nature and their interdependence affects the ecological balance, the conditions for living and working, and the society development perspectives as a whole. These relationships cover both the business content of the activity and the creation for human existence conditions.

As a result, the environment must be adapted and organized to meet the needs

of individuals, which means taking from the nature the kind of resources and their processing in order to serve the population. This dependence knows a highly reciprocal degree, because human needs are adapted greater or lesser to the environment.

Ensuring an appropriate environmental quality and its protection – as a need for survival and progress – is a matter of major concern for the social evolution. In this regard, the quality of environment must be preserved by reducing negative effects of human activity with its implications.

Pollution and drastic reduction of renewable material resources, far beyond the potential of their natural regeneration, have produced serious imbalances to the planetary ecosystem (EEA, 2006).

Thorough researches on environmental quality and efforts aimed at reducing sources of pollution have resulted in a series of actions and measures providing for:

- Comprehensive knowledge of the environment, and of the interaction between the economic and natural systems;
- Rational and efficient use of natural resources;
- Prevention of fight against environmental degradation caused by human and natural causes too;
- Harmonization of immediate and long-term interests of society as a whole or of the economical operators, concerning the use of environmental factors.

1.3. Environmental policies

Environmental policies have experienced two stages in their evolution (Călin, 2007). The first phase aimed at solving problems related to contamination of air, water, treating municipal solid waste and preserving natural areas, emphasizing the principle of polluter – paying, priority of corrective actions to the preventive ones.

The second phase of environmental policies began in the late '70s, bringing a new philosophy designed around the concept of sustainable development. Environmental policies are mainly anticipative, involving to a greater extent the civil society.

Moreover, it highlights the trends of globalization and integration into the social – economical policies. Thus, it tries to harmonize the economic time horizons with the biological, ecological time horizons, passing to a systemic approach to the economy and environment.

Integrating environmental policies into economic ones involves constraints and opportunities in both economic and environment policies.

Technological innovation has a crucial role in the integration of environment and economy. The extent of environmental problems suggests that technological progress will not be enough to deal with new challenges that governments will have to face.

According to Eurobarometer published in March 2008, more than two

thirds of Europeans prefer that the decisions on the environment policy to be taken at EU level (Eurobarometru, 2008).

According to the survey, Europeans are increasingly aware of the role that the environment plays in everyday life. More than 95% of Europeans believe that environmental protection is important. About 80% claim that the environment influences the quality of their life and assert that, through their own efforts, can contribute to its protection.

It also emerges that climate change tops the list of Europeans' environmental concerns, followed by pollution and man-made disasters.

The overwhelming majority of Europeans believe that EU should do more for the environment, and decisions concerning the environment should be taken at European level. They also find that the EU should harmonize the European legislation and help other countries to improve their environmental standards.

1.4. Environmental protection and economic growth

Environmental protection is a separate sector in the economy of human society, the concerns in this area covering any aspect of human activity (Klaver and others, 1999).

Current economic growth, fueled by scientific and technical progress, is destructive to the environment and brings increased risks of mankind. The relationship between economic growth and quality of life develops the idea that it is important to know what kind of growth should be promoted.

A strong economic growth leads to an increased pressure on the environment, with adverse effects caused by waste, emissions of pollutants, public space transformation.

Moreover, economic growth has positive effects: allowing the allocation of funds for the environmental policies implementation, accelerating technical progress and promoting the standard of living, comfort and education.

Often, measures of environmental protection cause contradictory effects – for instance, if the regulations in this area do not provide for companies reasonable time table to adopt them, the law is not respected. Once the procedures are clearly defined, firms gradually adjust their productive activities and the investments allocated to the environment may become an economic growth factor (Borzel, 2007).

To secure a balance, the intervention of the various actors involved is important: public power, industry, nongovernmental organizations, political parties, civil society.

Protecting the environment requires the identification of the mainly affected areas, the assessment of damage and of the causes which produced those imbalances.

As to how to protect, three categories of problems need to be solved:

- Creating appropriate and effective law and institutional system, to ensure compliance with applicable laws;
- Assessing the costs of environmental protection measures and identifying the sources of their financing;
- Developing long-term programs, linked nationally and internationally to environmental protection.

Concerning the costs assessment and how they are incurred, one may support the idea that environmental protection is costly and can not always identify pollution factors. Because of this situation, environmental protection costs are shared between potentially polluting companies and the state. Funds allocated to environmental protection vary from country to country, depending on their level of development.

Developing programs to protect the environment requires the identification of all the factors and areas where pollution problems may arise. Such kind of programs also requires assessing the costs necessary and the definition of the responsibilities for running the projects.

Environmental protection is a major problem of the last decade, discussed at world level, which gave rise to numerous disputes between the developed and developing countries. This called for the establishment of international organizations which have as main objective the adoption of solutions to mitigate pollution and increase environment quality in general (Duțu, 2008).

The European Commission has prepared a report on state aids in environmental protection, according to which they have doubled in the period 2001-2006, from 7 to 14 billion euros.

However, the data show large differences between Member States on environmental expenditure in relation to gross domestic product (GDP). Germany, Denmark and Sweden spent in 2004-2006, between 0.32% and 0.77% of their GDP to environmental aid. In other countries, the percentages are much lower, for example, the United Kingdom – 0.06%, France – 0.01% and in Italy the percentage is almost zero.

Reducing pollution should be a goal to protect the environment. In this regard, efforts are made at national and local communities' level.

For example, one cause of light pollution is questionable quality of public lighting. Spherical lamps transmitting more light into the sky than to the earth are the largest source of pollution and wasted energy unnecessarily. Lighting becomes more efficient by using lamps directed towards the ground, which transmit the brightness for the purposes for which they were installed.

The country that has the most severe laws against light pollution is Slovenia. The state has established, inter alia, a target for street lighting energy consumption of 50 kilowatts/hour per year per capita, which

means half of France consumption. The latter took the example of other countries and introduced in the field legislation stipulations on light pollution.

Lately, British people use less clothes dryers and more green bulbs. Also, they abandon cars more often in fear of global warming, says a recent online survey conducted by the organization Christian Aid (EEA, 2008).

The survey involving 2,127 adults, says that 9 out of 10 have already taken steps to reduce carbon dioxide emissions, 75% of them have changed traditional light bulbs with green ones and 70% do not leave any electrical appliance in stand-by, 57% do not start electric heating systems if not necessary and 42% use driers less frequently.

Lifestyle changes were extended to the transport chapter, so 36% often gives up the car and 19% fly less by plane.

Survey results show that 77% of British people believe the government should take more measures to reduce carbon dioxide emissions and take the lead in international negotiations on climate change.

2. Factors responsible for the environmental protection

The pressure of human activities on the natural environment increases very rapidly. It is accelerating industrial development, trade, movement of goods. Also, the space used for human activities is becoming wider. This development puts his imprint on the environment and its components, having an adversely affect.

Individual behavior pollutes to greater or less extent the environment, through daily activities or tourist consumption (Roberts, 2007).

The development of human activity affected all environmental components in different proportions. Of these elements, the most important are: landscape, soil, water, flora, fauna, monuments, parks, natural reserves and biosphere.

Therefore, the conservation of hygiene, sanitary, recreational and aesthetic functions of the natural environment components is a guarantee of continuous development of human society and it concerns both the authorities and all components of civil society at local, national, European and international level.

2.1. Involvement of the population

Most of the Romanian urban population has an environmentally friendly behavior and is favorable to renewable energy and for more than half of them, environmental issues are in second place after poverty.

Environmental campaigns are still early days in Romania. Specialists believe that adults can adapt quite difficult to the ecological constraints. Here after are some results of the first Green Barometer made in Romania by Terra Millennium III Foundation and Alma-Ro Association, with the support of the CEE Trust (Barometru Verde România, 2008). The

study was conducted from June to August 2008 on a representative sample of 1,165 people, in all regions of the country.

88% of the respondents believe that not enough attention is paid at national level to environmental protection and most are dissatisfied with regard to green area of town where they live.

In addition, over 80% admit that their own behavior is a primary pollutant, followed by car pollution and industrial factors. With regard to measures that they are most willing to adopt, they mentioned reducing water consumption and electricity.

Reduced involvement of people in solving environmental problems, i. e. waste collection and recuperation programs can be explained by:

- Lack of a systematic mechanism for information about environmental preservation and environmental consequences of breaches;
- Poor coordination of waste management actions at local decision makers, where citizens have to be included;
- Scarcity of funds available to the authorities can reduce the organization of campaigns for environmental education of children and adults;
- Low involvement in decision-making diminishes opportunities for citizens to express themselves directly by promoting initiatives on environmental policies.

Young people (less than 35 years old) are those who think the least to ecology, shows the Study "Environmentalism in Romania" conducted online, in 2008. Almost 20% of urban respondents in this age group stated that they have not heard of any environmentalist action, and most of them are skeptical about the tangible results of these campaigns.

Respondents outside Bucharest mentioned that only 34% took part in last year to such an action. In the category of people aged over 35 years, more than 56% participated in the campaign of planting trees or collecting waste.

In the last few years, public opinion has become increasingly concerned about environmental issues. This is often reflected in consumer's behavior, standing who opt for products that are not harming the environment.

2.2. Involvement of business organizations

Partnership between population, business organizations and authorities should be supported for the common interest of maintaining the quality of environmental factors within the limits imposed by legislation, of protecting the environment and human health, of improving the economic status of the local community.

In this regard, the business organizations have a crucial role in product development and production technologies that minimize the amount of waste generated. Products should be designed so

that their impact on the environment be minimized throughout their life cycle.

Such an approach that minimizes energy and materials losses is benefical to the organization itself. In many companies, saving potential costs of waste is unknown, so each year significant amounts are lost.

The economic crisis led to a decrease in consumption, and thus the quantity of waste diminished by up to 10%, according to a report of the Institute for raw materials, Cyclope (CEE, 2008). From this point of view, it is considered that the major losers of the crisis are the waste recycling companies.

KPMG, the global network of professional services firms providing audit, tax and business advisory, issued in April 2008 a report entitled "Climate change changes your business", which examines the risks of climate change on business (KPMG, 2008).

The report, analyzes 18 industry sectors, grouped into three zones depending on the risks faced and the preventive actions that should be taken. If in the "danger zone" are six sectors, in the "average zone" there are nine: auto, building and real estate, insurance, construction and materials of construction's production, mining sectors, pharmaceutical sector, retail and utilities industries. In the "safe zone" there are three sectors: telecommunications, food and beverages and chemicals.

The amount of municipal waste increased by 500% in Great Britain compared with the 1960s and waste from fast food restaurants are in second place after cigarette butts found on the streets.

The survey highlights even more the already negative images of fast food restaurants, so long as Mc Donald's comes in the first place in the quantity of waste, the second being the local ones, the third is Gregg's pastry and the fourth is KFC, with 8%.

Greenpeace Romania launched, in November 2008, the energy efficiency campaign, "Green Hypermarkets' Guide" (Greenpeace România, 2008). This guide ranks hypermarkets according to the importance they attach to global warming and thus to reduce emissions of carbon dioxide (CO2), by the policy they have to eliminate incandescent bulbs on the market.

At the request of Greenpeace Romania to eliminate incandescent light bulbs from the market, as quickly as possible, hypermarkets have responded differently. Ikea announced the elimination starting from early September 2009, Plus sets the deadline August 2010 and Auchan, Cora and Selgros Cash & Carry will only sell energy saving light bulbs from 2011.

The opposite is Metro, which said it will not remove from the market the incandescent bulbs until the adoption of legal provisions requiring this. Also, hypermarkets: Billa, Bricostore, Mr. Bricolage, Gima, Hornbach, La Fourmi, Mega Image, Penny XXL have not

provided any official response to the repeated requests of the Greenpeace Romania.

Most companies are aware that a significant extension of legislation on the environment will have a major impact both on their own business and on life in general, especially in areas such as energy, agriculture, transport and tourism.

All these changes have lead to an increased awareness of the responsibility of the organizations and management teams for their activities, which impact the environment.

2.3. Involvement of local authorities

In recent years, local government administrations have a growing interest in terms of urban modernization and its consequences on land use, transportation or the size of urban environment (Waddell, 2002). Connections between these areas, achieved through public plans and policies, facilitate a sustainable urban development.

Unfortunately, the analytical methods so far available do not raise to the level of desire for a coherent development. Neither enable they substantiated decisions and anticipate the possible negative consequences of political or infrastructure initiatives.

Many local communities are facing problems such as pollution, agglomerations in traffic, higher consumption of resources, and reduction of green areas. Public institutions, through urban planning agencies and citizens, take contact with these issues as they develop and evaluate alternatives to address them.

Local authorities have a key role in improving the environment. Diversity in terms of history, geography, climate and the administrative and legislative conditions are leading to the adoption of locally developed solutions, depending on specific conditions.

Applying the principle of subsidiary, which stipulates that action is to be taken at the most appropriate level, involves also a very intense local activity.

Thus, representatives of local authorities have responsibilities in the adoption of effective waste management plans, as well as stimulating partnerships with industry and business, and with citizens, to find solutions to minimize the amount of waste generated, facilitating their recycling.

To achieve these goals, local authorities have at hand a number of ways:

- Initiate information campaigns through mass-media (publications of the town hall, newspaper, radio and TV stations);
- Encourage the creation of organization forms of civil society that can take part in different activities to educate the citizens;
- Organizing seminars and exhibitions with information dealing with waste;
- Publication of leaflets, posters with practical advice related to the toxic household waste neutralization;

- Filling in of questionnaires on the implementation of waste management and its dissemination through local waste management companies;
- Organizing a system of payment by undertakings providing services organizations to stimulate citizens to sort the waste;
- Implementation of measures for awareness and attract children and young people in recycling activities;
- Support competition type action on environmental issues for children, students, youth, and adults;
- Attracting sponsors, especially among polluting enterprises;
- Organization in the city halls of waste management information centers.

2.4. Involvement of NGOs

Soros Educational Center conducted in November 2008 a national assessment of environmental NGOs (ONGM) in Romania (Centrul Educațional Soros, 2009). The survey shows that most of them have difficulty in communicating with the press and with government's institutions and that their big problem is the lack of funds. But things were going better at local level, where interaction and communication to the other social actors are more common.

The study also shows that 90% of ONGM's claim that their actions have the main beneficiaries young people and children.

In its first report, Recolamp association, established in September 2007, shows that Romanians have recycled around 160 tones of bulbs in 2008 (Recolamp, 2008). Recolamp was established by Philips Romania, Osram Romania, GE Hungary ZRT and Narva LLC. Nowadays, this non-profit association numbers over 100 members and has as main activity the collection and recycling, waste from used light sources in safe conditions for the environment and human health.

The association has been designated by the National Ministry of Environment to manage this waste stream and therefore has set up collection points and imposed Green Stamp usage – the fee for waste collection.

For 2008, Recolamp Green Stamp set that the value to energy saving light bulbs and fluorescent tubes is 0.9 lei (0.21 million), plus VAT. Romania is below the European average of 0.26 euros, well below countries such as Ireland, Latvia and Greece, where it can exceed 0.4 euros, but is above in countries like Sweden and Germany, which reached values from 0.08 to 0.1 euros. In 2008, the 100 companies participating in the scheme administered by Recolamp reported that 11 million units put on the market, charged for the Green Stamp more than 9.6 million lei (2.28 million euros).

But, due to the financial crisis, invoices received totaled only 5.39 million lei (1.27 million euros). In 2008,

the system Recolamp collected 160.58 tons of waste that is recycled by hand in Romania and in Germany by specialized companies. For 2009, Recolamp plans to extend the collection infrastructure expansion, from 1,000 to 2,000 collection points. Investment will continue given that spending in 2008 to recycle used light sources amounted to 1.4 million euros.

Lighting sources waste collection is part of European policies to reduce the costs and saving energy resources, but also protecting the environment. For example, scientists have calculated that Europe could make annual savings of seven billion euros if it had used 50% more energy saving light bulbs, which have a lower consumption and a higher life time duration.

2.5. European Union involvement

Today, waste production can no longer be considered one of the indicators that reflect the consumption and welfare, but shows progress of a society, how effective is it in relation to natural resource consumption and waste treatment operations.

Our production-consumption model must be adapted to the requirement of minimizing the pressure on the environment.

Legislation plays an important role in pollution control (Duțu, 2008). However, current law focuses mainly on regular spread of pollution, than on the causes leading it. In the EU, environmental legislation is becoming denser, and where there is danger that the situation becomes critical, the constraints are very high.

EU legislation is one of the most penetrating actions on environmental control, probably as a result of several factors: a strong political lobby, especially in countries such as Germany, an academic thinking in the environmental field in countries like Sweden and the Netherlands and the pressure of international bodies such as Greenpeace.

The idea of using environmental management systems (EMS) is sustainable in terms of EU policy. The fifth Action Program for the reorganization law could not solve all environmental problems. This Program includes basic market tools and bilateral agreements – EMS, eco-audits and eco-characterization fits in this category.

Market based instruments are intended for internal analysis of environmental costs. The need for responsible use of scarce resources must be demonstrated by consumers and producers. Pollution and loses also need to be reduced.

EMS sites the market economy factors in environmental field through promotional competition between industrial activities.

The assumption is that the market will reward the organizations that use EMS, resulting a pressure that will encourage other companies to follow the example. Overall result could materialize in several

organizations that will become active in improving environmental performance.

EMS adopts the principle of the polluter payment and the prevention that are part of EU environmental policy by placing responsibility on business and using a proactive approach, as opposed to a reactive one.

Standard environmental management system refers to the basic market mechanisms, which aim to improve the performance of organizations.

The structure to achieve EMS aims quality management systems (QMS) which is mainly based on providing finished product quality, while environmental management systems have not in view the finished product.

The main goals of the environmental management systems are:

- Promoting activities that can have a significant impact on the environment;
- Continuing improvement of environmental management processes;
- Assuring awareness of environmental pressures on business.

Many companies are facing difficulties; the financial ones are clearly a relevant feature in the business environment. However, environmental pressures have significantly increased both locally and internationally field.

Conclusions

New environmental policies propose an integrated approach that contributes to a higher quality of life and social well being of citizens, by providing an environment where pollution levels do not generate harmful effects on human health and the environment.

Integrated approaches to environmental protection lead to better planning and significant results.

Solutions must be future-oriented, incorporating aspects of risk prevention, and anticipation of climate change (e.g. increased flood hazard) or gradual reduction of dependence on fossil fuels. Local initiatives to solve problems can generate new problems in another area and may be in conflict with national or regional policies.

The obligations imposed on local, regional, national or European level (e.g. efficient use of land, reduced noise, increased air quality) can be fulfilled more effectively at local level when integrated in a local strategic management.

Defining clear objectives and targets, responsibilities and procedures for monitoring progress, public consultation, checking results, auditing and reporting is crucial for effective implementation measures of environment protection.

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