

The Reconstruction of Economics

“I do not feel compelled to believe that the same God who has endowed us with judgment, reason and intellect had intended for us to forego their use.”

Galileo Galilei

The greatest challenges to formalization and calculus in Economics appear when determinism is put to doubt. It should not necessarily be the elimination of the hypothesis of determinism, but of something akin to our capacity of understanding and explaining: the identification of causes and the evaluation of effects. There is also one seldom visited area: determining the correlations between causes, on the one side, and effects, on the other.

The mechanical manner of perceiving the functions of Economics remains though the greatest epistemic handicap, and it resides in a completely inadequate simplification of the vision: the plane linear representation. Economics endured as a form of Euclidian, bidimensional geometrics.

The fundamental economic function describes a curve on a plane, with real number values, either positive or negative. Economics manuals illustrate the behavior of functions within Cartesian axes. The trends develop either in the positive perimeter (win), or in the negative perimeter (loss).

It must be noted that the positive and negative have sense in the economic function only for operations of addition or subtraction. Progressions in Economics are mathematical additionalities (uniformly increasing or decreasing series). Geometrical increases, exponential increases etc., for instance, are relegated to the domain of multipliers. Most often these are considered statistical constants, with a corrective role. What happens from cause to effect outside the behavior of classical variables (and cannot be described through another quantifiable variable) pertains to the competence of the multipliers.

It is well known that in the production functions applicable to endogenous economic growth the most constant effects do not pertain to the variables used – labor and capital (in various forms). The effects of technological progress are calculated distributively with statistical coefficients.

Empirical research has shown that the theory of economic growth has never managed relevancy on the basis of a simple factorial model (with two factors). The growth differentials are, beginning especially with the second half of the last century, favorable to exogenous factor according to the rules of classical economic theory.

The aspects of inconsistency bear an importance which is easily and fatally overlooked, for the credibility of the theory. Making the technical progress endogenous rather suggests insufficiencies in the direction of instrumenting economic growth, and the ascertainment that there are also other important factors which explain the dimension of the growth – such as geography, traditions, culture etc. – constitutes an implicit plea in favor of the theoretical preeminence of the concept of economic development. But also for the epistemic urgency of the reconstruction of the functions of Economics, inserting into them multiple variables.

But the most unsatisfying aspect of the main functions of Economics (the production function, the market function and the monetary function) is related to the fact that in reality the territory of rationality represented by the intersection of the curves described by the functions is much reduced when compared to the cumulated area. Surely, it is admitted that the functions describe plane curves, usually circles, although these could be of the Mandelbrot type, on an Argand plane. Either way the intersection of the three curves describes in all representations the zone of rationality, while the intersections of either two of them illustrate excesses, which we often consider to be economic performance.

For instance, the intersection described together by: the production function and the market function is the perimeter of rent-seeking; the market function and the monetary function – the perimeter of financial intermediation, monetary function and production function – is the perimeter of credit. The areas of non-intersection represent: on the surface of the production function – self-consumption; on the surface of the market function – the black market; on the surface of the monetary function – fictitious money.

The mediated values belong to the area of triple intersection where the economic laws competition and rational calculation are valid. The performances – in a profit sense – are met in the dual-interference areas.

The equilibrium has the sense of a trend only in the perimeter common to the three areas (computable, provable). Though the growth of the common area described is the result of the defining behaviors of disequilibrium. This one is in line with the propensity of systems of functioning only close to – and not in – equilibrium.

If these hypotheses describe reality, it means that Economics must change its fundamentals, the basic vision being either way the one built on the assumption of general equilibrium and rational behaviors.

After all, focusing on the concept of favorable disequilibrium seems more adequate for the understanding of economic functions; the concept describing the state in which a system is capable of maintaining its performance in conditions of progressive change. The trends of calculating performance on the frontiers of the common areas become rationalizable in the spectrum of the favorable disequilibrium.

Economics redraws its rationality alignments always at the limit, even though, in fact, there can only be a radical reconstruction of the idea of performance so long as the functions of the economy are put into the context of the natural environment.

The suggestion, which seemed exaggerate, that the economists are guilty for the economy's irrational-type counter-performances looks like it has to be taken seriously.

Challenging the basic hypotheses of Economics is inevitably necessary.

Marin Dinu

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The Security of the Dynamic Systems

■

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*When the only tool you own is a hammer,
every problem begins to resemble a nail.*

“Security is everyone business.”

Abraham Maslow

***Abstract.** In a world that is characterized by the globalization phenomenon, the current economic decision-making process is marked by a dynamic and objectively amassed complexity. Besides the ability to forecast the production of certain results, the manager must have at disposal scientifically-supported decisional variants in order to estimate the risk of the adopted strategy.*

The estimates rely on the available information, on the capacity to assess it, as well as on the manager’s decisional behavior. As to the acknowledgement of the potential perturbations and the consequences of their occurrence, the manager has to analyze various alternatives of action and to choose the alternative that offers the best opportunities, concomitantly with a behavior that inflicts minimum risks.

Keywords: security culture; risk management; critical infrastructure; dynamics systems; competitive counterintelligence.

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An ample process aimed at making sensitive the micro and macroeconomic decision makers towards the harsh need for the initiation of projects on the development of the concepts associated to the so-called „security culture” began in the aftermath of September 11.

In Romania, the main effort directions have been focused on the public promotion of certain topics such as:

- Public diplomacy and intelligence authorities;
- Energy diplomacy;
- Preemptive diplomacy;
- Trans bordering threats and citizen security;

- Bio-terrorist threat prevention and counteracting;

- Promotion of the concept pertaining to the *Protection of the critical infrastructure* at the level of community and local and regional authorities;

- Implementation of the program dubbed „*Terrorism beside us*” within the Romanian education system.

A program for the *Protection of the Critical Infrastructures (EPCIP)* was launched at European level on December 12, 2006, stipulating eleven sectors of interest and thirty-two critical services associated to these sectors:

Serial no.	Sector	Product or service
1	Energy	<ul style="list-style-type: none"> ▪ Gas and oil production, activities related to refining, chemical treatment and storage, including the pipelines; ▪ Electric energy production; ▪ Electric energy, gas and oil transportation; ▪ Electricity, gas and oil distribution;
2	Information and communication technologies	<ul style="list-style-type: none"> ▪ Information systems and networks; ▪ Command, automated and device systems; ▪ Mobile and fix telecommunication services; ▪ Radio communication and navigation services; ▪ Satellite communication services; ▪ Broadcasting services;
3	Water supply	<ul style="list-style-type: none"> ▪ Drinking water supply; ▪ Water quality control; ▪ Water quantity control and damming;
4	Food	<ul style="list-style-type: none"> ▪ Food supply, food security and safety;
5	Health	<ul style="list-style-type: none"> ▪ Medical and hospital care; ▪ Medication, serums, vaccines, pharmaceutical products; ▪ Bio-laboratories and bio-agents;
6	Finance	<ul style="list-style-type: none"> ▪ Payment services/connected structures; ▪ Governmental financial systems;
7	Defense, law enforcement and national security	<ul style="list-style-type: none"> ▪ Defense, law enforcement and national security; ▪ Border integrated management;
8	Administration	<ul style="list-style-type: none"> ▪ Government; ▪ Armed forces; ▪ Services and administration; ▪ Emergency services;
9	Transportation	<ul style="list-style-type: none"> ▪ Road transportation; ▪ Railroad transportation; ▪ Naval, fluvial, maritime and oceanic transportation; ▪ Air transportation;
10	Chemical and nuclear industry	<ul style="list-style-type: none"> ▪ Production, processing and storage of the chemical and nuclear substances; ▪ Pipelines for perilous chemical products/substances;
11	Space	<ul style="list-style-type: none"> ▪ Air traffic.

If the issue concerning the protection of the critical continental infrastructure is so keenly made obvious at the level of the European Union, then who is interested at national level in the issue concerning the security of the large local and regional companies as part of the national infrastructure?

Romanian specialists from various ministries, state and private operators, as well as academicians and researchers and representatives of the civil society and of the media constantly participate in various European specialized structures, conferences, roundtables, workshops, scientific research projects in the field of security and have the opportunity to make remarkable and prized contribution to this field, to exchange expertise and information, conclusions, risk assessments, documentary papers, lessons learned and measures intended for the protection and recovery of the affected systems.

In a world that is so intensely characterized by the globalization phenomenon, the current economic decision-making process is marked by a dynamic and objectively amassed complexity. This complexity is the result of a strong combination of the material, human, energy, financial and information inflows.

The economic agents must assess the risk they assume by adopting some decisions out of a finite pool of possible decisions. The instability of the market, the limited possibility to find out the future actions of the competitors, the degree of political stability in the economic area, inflation, state currency policy, economic laws, etc., are only a few elements that influence the overall business risk.

Besides the ability to forecast the production of certain results, the manager must have at disposal scientifically-supported decisional variants in order to estimate the risk of the adopted strategy. The estimates rely on the available information, on the capacity to assess it, as well as on the manager's decisional behavior.

As to the acknowledgement of the potential perturbations and the consequences of their occurrence, the manager has to analyze various alternatives of action and to choose the alternative that offers the best opportunities, concomitantly with a behavior that inflicts minimum risks.

In most cases, the scientific study on a system or phenomenon may be conducted through real or artificial experimentation. In the economic field, the real experimentation is rarely because it requires great expenses and risks. The artificial experimentation, although sometimes it implies a significant intellectual and financial effort, allows the avoidance of some real situations that occasionally have catastrophic implications.

The analysis of the complex economic systems may be performed using the methods and procedures of the analytical dealing with the econometric patterns.

In such cases, fields like the *theory of systems*, *the theory of decision*, *the operational research*, *economic cybernetics*, etc. make use of the appropriate mathematical methods.

Given the complexity of the real economic systems, the stochastic reliance among different variables and considered parameters, not all systems might be represented properly through a pattern that can be managed by the use of the analytical

methods and that can encompass all issues of analysis/managerial decision for a real economic horizon. Most of the times, in such cases, the simulation method is seen as the viable and available alternative.

The approach of the economic systems as some self-adjusted complex systems underlines the existence of some feedback mechanisms having the shape of chains (cycles) of causal dependence among the fundamental variables. Extremely important variables, such as income/output are influenced by more feedback like mechanisms and their end-state level that is achieved at a specific moment is the result of the overlap and intermingling of the effects induced by these feedback mechanisms that are active within the economic system.

The occurrence and action of such adjustment and self-adjustment mechanisms that have been noticed long ago within the cybernetic approaches on the economic systems and on the biological, ecological and social systems is considered nowadays as being characteristic to the complex dynamic systems, irrespective of their nature. It is acknowledged that an economic system that is perceived as an evolving dynamic system naturally creates for itself the adjustment and self-adjustment mechanisms that are used subsequently to ensure stability and growth. No economic system can survive without these mechanisms that are able to offer it a certain position and control in the relation with other economic systems or other systems of the environment.

As to the current approach, we will focus on the issue of the security of the complex dynamic corporation-like systems

that can be targeted by the pressure posed by various types of risks. In this context we start out with the idea that the approach on the foundation of a systemic concept regarding the business environment should take into account its multidimensional character but it ought not to be reduced to this value. We become aware of the development of a new type of economy based on intelligence, and this triggers a new dimension in the level and status of competition among companies that is usually adjusted to the complexity of changes in the economy and society.

It is difficult to define the security concept because of the fact that it represents a multidimensional class that can be tackled from multiple perspectives.

Theoretically, a *dynamic system* stands for the mathematic translation of an established „rule” describing the reliance on time of a position of a point in a multidimensional space such as the description of the performance of an economic agent, the patterns that describe the movement of a pendulum clock, the flow of a liquid in a pipeline, the number of fish in a lake each spring etc.

Types of systems

In most cases, through the security of a complex dynamic system from the perspective of the above-mentioned things we understand a state of balance that is necessary to ensure the permanence of the activity for which the system was designed, simultaneously with the process of making minimum the risk of the business and maximum the current and future

opportunities of the business. The security of the complex dynamic system (corporation) may be achieved through the framing, designing and implementing of an appropriate set of security measures that can

be policies, processes, procedures, organizational structures and functions related to the insurance of the integrity of the personnel structure, of the patrimony, of the financial and information aspects.

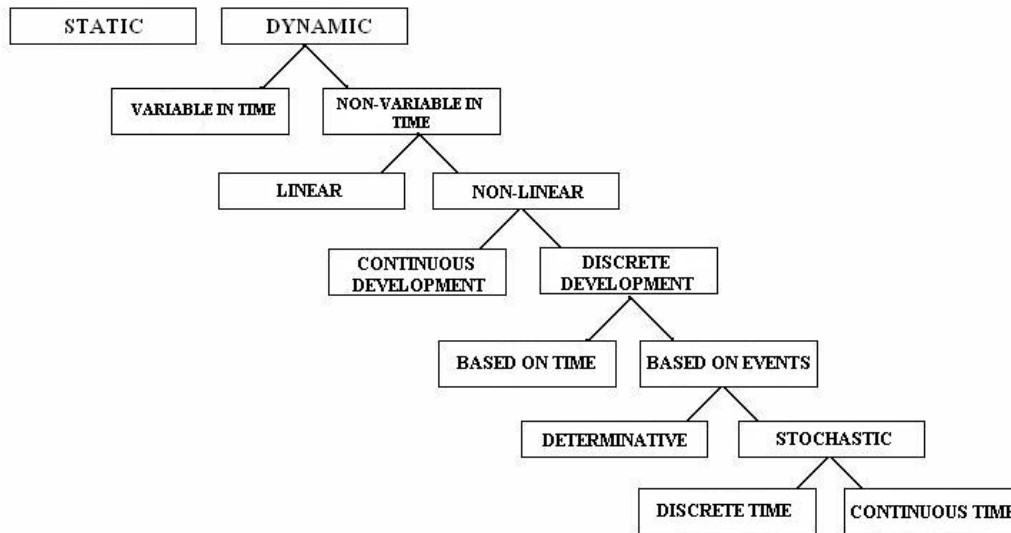


Figure 1. Types of systems

From the perspective of a manager, they may be oriented towards the „inside” of his own organization and represent efforts to identify and define his own weaknesses related to personnel, foreign persons, as well as to integrity of the material, financial and intelligence patrimony.

Additional to this approach, the manager must attach an equal importance to the „threats” that originate from within his organization. These threats are emphasized by the existence of a competition environment that becomes aggressive to a greater extent and it is not characterized by positive sum game all the time, but rather by null one.

The main concepts conveyed within the theoretical approaches in the domain of security of the complex dynamic systems are *vulnerability*, *attractiveness*, *threat* (potential

threat) and *risk* that are to be described in the following paragraphs.

Vulnerability. The vulnerabilities of an economic system are in fact *weaknesses* that may be used by an adversary as *opportunities* that might be exploited in order to gain current or future advantage within the competition. The vulnerabilities may be triggered by practical weaknesses of the current activities, including those related to the management, human and material security or procedures of operational security.

Regularly, the vulnerabilities are analyzed and assessed by simultaneous examination of the threat and likelihood for an objective to become a target, as well as by examination of certain sequences of specific developments (an approach based on scenarios).

Attractiveness. The attractiveness of an economic system (target) is a complex estimation on the way this is perceived by a competitor or a specified adversary. The threat (potential threat) can be described as an indication, circumstance or event having a potential that can trigger losses or human, material, financial and information damages inflicted to a target. It can also be described as the intent or potential capability of a competitor to develop actions to the detriment of some goals related to his own interest.

The threat sources may be:

- Competitor companies;
- Activists with various leanings or pressure groups;
- Frustrated or dissatisfied employees or contractors;
- Members of some criminal groups (hacker, smugglers, participants in the organized crime activities);
- Terrorists or terrorist organizations.

The information on a threat (potential threat) is a reference that allows the analyst to understand the enemies who are interested in the targets, the history of the modus operandi, methods and assets, potential plans and what drives them to act, etc. This kind of information might be used to forecast the consequences inflicted by possible materialization of the threat or threats.

The adversaries can be divided into three large categories of threats:

- Internal;
- External;
- Internal with external connections.

Risk. The risk, as an abstract concept, is described through the negative consequences of the occurrence of an undesired event. It can be represented by a *numerical value* (the

likelihood of the occurrence of an undesired event, of the hazard) and it can be counteracted through a scientific assessment aimed at preventing events or alleviating their consequences.

The undertaken risk is minimum when the agreed alternative (which is well chosen and drawn up) is close to the most advantageous one, following the formula:

$$R(S_i) = \max [U^*(S) - u_i]$$

with:

$i = 1, 2, \dots, n$, n is the number of situations;

U^* - optimum value of the used function of the system;

u_i – current value of the used function.

The risk management is still a concern of the modern world. It appeared just at the beginning of the human groups and it was obvious under various preservation or confrontation shapes; it was developed gradually until it reached complex ways to mend itself, to preempt various types of threats or to adjust its vulnerabilities. A long and difficult road was crossed from „*it is better to have a little bit of luck than an appropriate treatment*” to „*reason instead of panic*” and „*aware action*”. Otherwise, a huge increase was performed from taking the hazard to identifying, assessing and controlling the risk concerning the occurrence of certain undesired events.

It is estimated that the security risk depends on the consequences of an attack against the economic-social system and on the happening likelihood of a threat. The latter depends on the attractiveness of the target to the adversary, on the type of threat used by the potential competitor, on the vulnerability degree of the system, as well as on the measures used to counteract the risk.

A risk is considered as being high if it is also characterized by an increased level of likely successful attack against a target entity that is of paramount importance for the system. This likelihood may rely on other factors such as: attractiveness to the adversary, level of threat, vulnerability, etc.

If the likelihood of performing a successful attack against a critical target is high, the risk is considered high and appropriate measures will be established to protect a critical target exposed to a high risk.

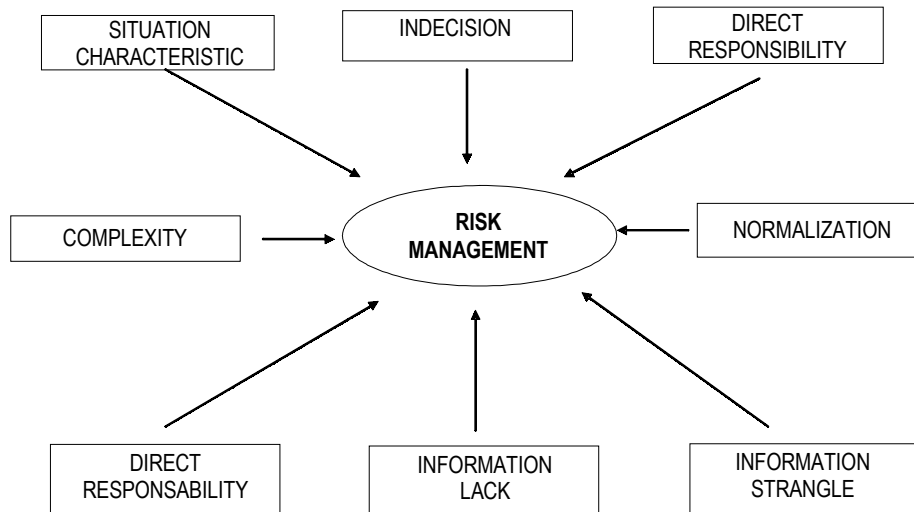


Figure 2. Factors that influence the risk management

The severity of the consequences in the aftermath of a security event against a target is usually measured in the number of victims, material, financial and information damages or losses that may be inflicted by a successful attack.

The deliberate human actions (following a plan) may generate serious effects that can be comparable with those generated by accidents, including by large earthquakes or deluges that may result in:

- Human victims;
- Damages or negative consequences over the environment;
- Direct or indirect financial losses of some economic agents;
- Disturbance concerning the well functioning of the national, regional

economies and of some economic operations;

- Loss in the reputation of some companies;
- Need to evacuate the population that lives or works nearby the facilities with increased terrorist risk;
- Excessive publicity for certain subjects with high emotional impact in the media and within the population.

The critical infrastructure elements may pose dependences and interdependences that should be considered carefully. Wherever is needed, the stealing of dangerous materials must be included in the category of striking security events.

In general, the theoretic category called consequences is one of the key factors for

the determination of the critical importance level of the target and for the required security countermeasure level. During the stage related to the characterization of the target, the consequences are used to identify the special social value objectives. For instance, the terrorist structures do not seem interested in the targets that generate insignificant consequences (those that do not correspond to their criteria of valuable impact).

Targets' attractiveness

Not all targets have the same value for the competitor organizations. The attractiveness of an organization (target) is given by an assessment on the real or perceived value of a competitor (adversary).

The attractiveness factors of a target (competitor) can be measured taking into consideration the following aspects:

- Type of the triggered effect;
- Maximum number of victims;
- Maximum damages inflicted to the target;
- Maximum damages in the area;
- Major damages to the national infrastructure;
- Potential of the utilized materials to produce collateral damages;
- Distance until the target belonging to the national infrastructure;
- Difficulties in carrying out the attack, including the possibility for access and the level of security measures;
- Company's name or to what extent its reputation is damaged.

The attractiveness level of a target that is intended to be protected from the

perspective of its security represents a significant target for the team that analyzes the status of the pondered dynamic system.

During the evaluation process, the attractiveness of a target can be assessed starting with the opponent's intentions or with the estimate on the interest as far as the target is concerned.

Security strategies can be developed taking into account possible threats and possible targets. The attractiveness along with the consequences is regularly used to assess targets in the context of the analysis on more specific scenarios.

A first step of the effort aimed at ensuring the security of a complex dynamic system (corporation) is the recognition and analysis of the threats and vulnerabilities and the result is a *state analysis* (SA) study. SA in itself is a dynamic and systematic estimate on the "success" probability of a "threat" to a dynamic system.

The process takes into consideration the possible "severity" of the impact on the corporation, on the human communities nearby critical systems (hydro dams, nuclear stations, water and power supplying systems, etc.).

Certain rational steps must be followed, no matter what methodology is used:

- General characterization of the dynamic system (industrial) with the purpose to be aware of the human values, the fix assets, the informational and material goods (values) that must be provided, their importance, connections, and influence within the infrastructure of the system;
- Recognition and characterization of threats to these goods and their assessment taking into consideration their attractiveness

as targets, as well as the impact on their destruction or break-in;

- Identification of possible vulnerabilities to security that might threaten equipment and machines or their integrity;

- Determination of the risk posed by certain events, by identifying the likelihood for the occurrence of an incident and its consequences;

- The incident's level of risk and in the case the level of risk is high to offer recommendations for its decrease;

- Identification and assessment on the option intended for the decrease in risk (decrease of gross risk and cost-advantages analysis) and reassessment on the risk following the implementation of the appropriate countermeasures.

The basic idea of our approach relies on the fact that we agree that all risks on a system security cannot be efficiently monitored and prevented.

Generally, the goals pursued with the purpose to ensure security are related to the cascade use of four basic strategies to minimize the risk:

- Deterrence;
- Identification – detection;
- Annihilation – delay;
- Counter-response – counter-action.

The appropriate strategies in managing security can be various depending on the concrete circumstances of each goal and taking into consideration the type of the target and the threats.

To create *an effective security system* the following stages are necessary: risk assessment, definition on the security policy, implementation, management and audit.

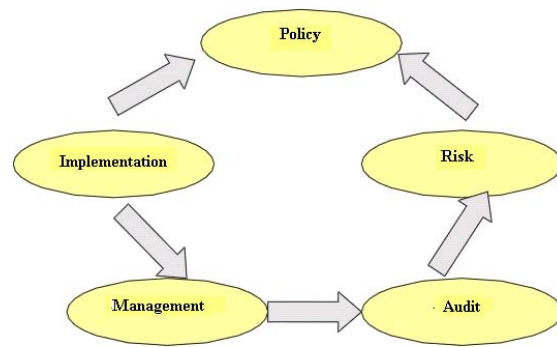


Figure 3. *Integrated system necessary to ensure the security of an organization*

An integrated system meant to ensure the security of a corporation (complex organizations) consisted of specialized subsystems directed towards:

- Physical security (considers the protected area, the building systems and safety rooms);

- Personnel security (considers the personnel vetting, security tests, appointment approval and any kind of access authorization);

- Papers security (hard and electronic format);

- Industrial security (considers mainly the technological and commercial data);

- Information security (INFOSEC);

- Communication security (COMSEC);

- Cryptographic security;

- Transmission security (TEMPEST).

The suggested approach does not offer the solution to the security measures that must be taken, but as an alternative it provides all means to identify, analyze, and lower vulnerabilities. The specific situations must be assessed independently through a local management system based on the best reason and applicable procedure system. Appropriate management decisions on the risk to a system security must be made according to the risks.

The flexible approach emphasizes the fact that there is no standardized approach of the security concept in the social life and resources are not always well used to immediately reduce high risk situations. On the other hand, all managers in this field are encouraged to cooperate with national intelligence, security, and guard agencies and with local emergency services on integrated and systemic basis, including by getting information, training and resources to stop some detrimental actions or by emergency situation management.

A sensitive issue in this field, that is also extremely difficult, is related to the costs to ensure security of an organization. Without having enough statistic data, inspired only by specialized literature, we are able to formulate some estimates on the efficiency – costs dependency in the security field.

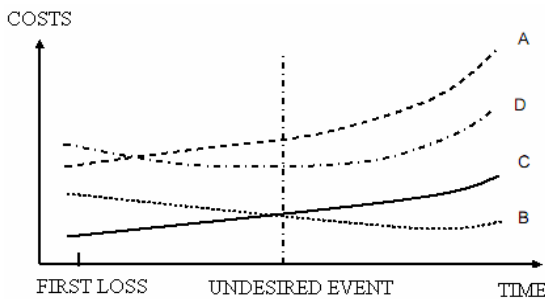


Figure 4. Costs in the security field

In Figure 4 we can notice the costs triggered by the undesired event that happened (A curve) that are lower previous to the event and they increase significantly after the event; costs for risk management implementation (B curve) are higher during the first implementation stage (investment costs) and almost constant after the implementation (function and maintenance costs) and costs caused by the undesired event

when the risk management is implemented (C curve), which are not increasing too much after the event (increase is controlled by the management effectiveness).

Although the curves in Figure 4 are qualitative, we can notice that costs for the damage compensation are higher than those for risk management function and implementation (D curve) if a risk management does not exist.

The first benefit of the risk management is the opportunity rise added by the general management close to the moment of the undesired event for both the mitigation and elimination of human errors and prevention of system’s malfunctions.

Corporate security management

Currently, given the fact that the global crisis has become a controversial subject, governmental structures and private ones are looking for solutions to get out from the dark spot with minimal losses, and some private companies can afford to even think about profits.

For private companies, the solution for leaving the crisis behind depends on the increase in the company’s effectiveness, on maintaining, as much as possible, the present markets, on identifying new outlets, new financial sources, new ways to approach the outlets, on finding some methods to outrun the competitors in the targeted markets, on identifying some ways to entice potential clients, taking into account their demands, on educating customers according to the policy of the private companies, etc.

One of the most efficient ways used by the companies aware of this process is comprised by the concept called *Companies*

security management also known as *Business Intelligence*.

Currently, many private institutions, companies or specialists, more or less experienced, talk about *competitive intelligence*, *business intelligence* etc.

The truth is that two notorious dictionaries comprising terms in the intelligence field do not define business intelligence or competitive intelligence, even if they prove their real competence in defining other sensitive terms in this field.

National or foreign authors writing books in this field cannot reach an identical approach on the phenomenon and the more you read in this field the more confused you are on such terms.

Most people who have been concerned or are concerned with this field are more or less experienced in the field of national security and, unfortunately, just a few are experienced in the field of operational intelligence. Maybe, this is the reason why the definition of the basic terms is so confusing. Besides, during the talks held with some authors, they recognized years later after they had written the books that they had made confusions.

Based on the experience earned in the intelligence field at the level of national security and also on the talks, sometimes contradictory, held with various authors, we have tried to define the terms with the purpose to identify the ways and means that can help us to reach the end state – increase the company's effectiveness. The general concept can be identified as: *Companies security management – business intelligence*, which consists of two basic fields: *competitive intelligence* and *company's protection*.

Competitive intelligence

Competitive intelligence consists of all activities related to information planning, collection, processing, analysis and dissemination with the purpose to support the company's leadership to make a decision.

Simultaneously, the intelligence process also allows the identification of the ways to make the decisions in a company and to check, in the end or in the middle of the process, the effectiveness of the decisions.

Competitive intelligence comprises:

A. *Competitive intelligence in one's company* aims at getting information from inside one's company in order to increase its effectiveness. This means, first of all, to assess the company's current functioning level both as organizational structure and personnel. Analysis on the organizational structure means to find out responsibilities and the specific activity of each department or section of the company, their relations, the intelligence cycle, the hierarchy in the decision making process, each responsible decision level, the training level specific to each position and to what extent the *job description* for each position makes a functional system. Personnel appraisal refers to the real training level specific to each position, to the satisfaction degree of the job, to the way they get involved in the decision making process, to the team spirit, to the loyalty to the company, to the personnel horizontal and vertical relations and also to the way they interact with chiefs and subordinates, to their personal opinion referring to themselves and to their mates, to the necessary training for the activity they must perform, to the identification of potential leaders, etc.

B. Competitor intelligence – to get information on competitors, on competition. This means to get only valuable information intended to have an effect on or influence on the company's interests, not unsupportive information. In general, getting information on competitors is not very expensive but it involves some financial efforts. For this reason, similar to other situations concerning the information collection, it is necessary to get only information that is significant to a specific project or field. In this case, it is essential to get information on the competitor's intentions and opinion regarding that particular company. One of the most often pertinent procedures in the relations among the rival companies is misinformation. Companies with a good intelligence structure can identify misinformation and also get data on the intention that makes the subject of misinformation and, subsequently, they identify weak points or aspects that the rival company tries to avoid or to cover through misinformation.

C. Market intelligence – to get information on the company's possibility to interact with its outlet. This involves data on the current market situation, on its evolution on short and medium term, on market's demands on short and medium term regarding a particular product, on the competitors' presence in the market and the market overload potential, on the finding out of new outlets, on the expenditure needed to promote new products, on the choosing of the best moment to issue a new product for the market, on the need to educate the market with regard to a new product or to a product that is to be issued, on the identification of new clients, on getting

information about potential clients (financial potential, intents to purchase new products, the moment when products are to be purchased, client decision process evolution, the possibility to make a partnership with the client, client education on the necessity and performance of a new product, etc).

D. Financial intelligence refers to the capital market financial evolutions in the areas of interest, to payment possibilities, to the optimal currency for possible bank deposits, to the possibility to make financial transactions, etc.

E. Assessment on the risk to new investments in the market means to get information on the political, economic, and financial stability in the areas where the investment is to be made, to assess the security situation in the area, to determine the corruption level in the area that might influence the competition, to determine the creditworthiness of the local companies that might become subcontractors, to determine elements of regional culture that might influence the negotiation process, data on members of the negotiation teams in order to be aware of their endurance negotiation capability, to assess the market possible evolution in that area, etc.

Company's protection (competitive counterintelligence)

Competitive counterintelligence refers to all measures taken to ensure the company's counterintelligence against intelligence collection actions of other interested companies or structures, to measures meant to protect the company against acts that might damage its resources and assets.

Company's protection means:

A. *Physical protection* of buildings and assets against damaging acts or against bad-intended persons trying to breach rooms without authorization. For this reason, it is necessary an estimation on possible threats to the company, an assessment on the company's vulnerabilities in front of those threats, an assessment of the risks emerging from these threats and after that a plan for the company's physical protection is drawn up;

B. *Documents protection* means to annihilate any possibility of getting out or copying some sensitive documents concerning the company and its interests. The current technology allows the full protection of these documents through RFI (radio frequency identification) procedure which means to attach a micro-broadcaster of low frequency like a stamp on each document which must be protected;

C. *Personnel protection* means both to know people before they are employed and to evaluate vulnerabilities of each person as possible source for the rival companies;

D. *IT protection*: from this point of view everybody knows that only the Intranet, that is physically separated from any other computer system, can guarantee total protection against the unauthorized leak of information from the IT network;

E. *Communication system protection* refers to the use of the legal means to protect communications against unauthorized interceptions.

Only one specialized department of the large companies, comprising a competitive intelligence division and a protection division (competitive counterintelligence)

can apply the above mentioned means and ways to increase the company's economic effectiveness.

This department organization follows, in fact, the intelligence cycle: it takes over the intelligence needs from the company's leadership, it fills in the intelligence needs with data that the business intelligence structure considers necessary; it draws up the information plan necessary for the company, it plans the information collection, collects information, processes information, analyses information and changes it into intelligence; the last stage is intelligence dissemination.

The protection department (competitive counterintelligence) aims at assessing vulnerabilities, analyzing them with the purpose to identify those vulnerabilities that might turn into risks, at acting with the purpose to develop a risk warning system simultaneous with the analysis of risks that might turn into threats. Threats are eliminated by successive protection rings depending on the significance of damages they might cause to the company. Finally, some threats are likely to escalate until they reach the conflict stage. In this case, the protection department must have an intervention plan they should apply in the crisis moment previously to the conflict.

A company can either have its own department of business intelligence or it can cooperate with a company specialized in business intelligence.

Both the competitive intelligence process and the competitive counterintelligence one refer to the exclusive use of information collection through legal means. The main information collections legal means are: open sources and human sources.

The only legal way to collect information by HUMINT is elicitation (blind exploitation). As long as the elicitation does not aim at getting top secret information, then this method is legal. Illegitimacy is beyond this barrier. Elicitation is an extremely efficient method in competitive intelligence but requires a specialized training.

As stated before, as long as these means are the only ones used, in the above mentioned circumstances, business intelligence is a legal activity. The border between legal and illegal is very clear cut, but it is also very thin. For this reason, the personnel working in the specialized departments should be trained paying a great attention to the legal aspects.

In case this information collection process reaches a stage when information relevant for national security is obtained, then it is absolutely necessary for the company to convey them to the national security structures without going on with the investigations on its own.

The economic advantages resulting from the increased effectiveness of the companies that have specialized structures for business intelligence exceed the budget allotted for the expenditures necessary for the development of these compartments. Therefore, I believe that this can be a solution for the large companies to face the crisis and even to increase profit.

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Substantiating the Incurred but not Reported Reserve

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***Abstract.** In order to handle past and future liability taken by insurance contracts concluded, any insurance company must constitute and maintain technical reserves. Substantiating technical reserves is done through actuarial methods and its over-evaluation or under-evaluation influence solvency and financial performance of the insurance companies, in the sense of reducing solvency through over-evaluating reserves and, respectively, influencing profit (hence of outstanding tax) through under-evaluating reserves. An important reserve for insurance companies is represented by the incurred but not reported reserve, as it allows the estimation of the liability the company may confront in the future, generated by events occurred in the past, which are not currently known in the present but will be reported in the future.*

Keywords: incurred but not reported reserve; chain-ladder method; run-off triangle; development factors; reported but not settled.

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JEL Code: G22.
REL Code: 11C.

The operation of estimating technical reserves presents a special importance to insurers as funds generated by them are invested in various profitable markets and the profits obtained are an important source of income.

For liability to the insured, determined by the prejudice which occurred and the insurer was informed about, insurance companies form their RBNS – reported but not settled. There are although prejudice from insurance contracts generated by the occurring of the insured risk which happened, weren't reported to the insurance because of various reasons and may be made known to the insurance in the future. In order to cover this liability from not reported prejudice, the insurer must constitute the incurred but not reported reserve – IBNR. Determining this reserve is done using one of the following methods: the “rate of prejudice” method (there are no triangles used), basis chain-ladder, chain-ladder method to which is applied the inflation correction and the method of average cost per prejudice. According to the legislation in our country (The Order of the President of the Commission for supervising Insurers no. 3.109/2003 with the latter modifications and completions), the incurred but not reported reserve is created and is adjusted at least at the end of financial activity, if internal regulations of the insurer do not foresee otherwise, based on its estimations, statistical

data or actuarial calculus for incurred but not reported.

Due to the importance the incurred but not reported reserve has for insurance companies, within this article we aim at highlighting a way of estimating it substantiated on the basis chain-ladder method. This method consists of evaluating liability (prejudice) which are going to be paid in the following years to come, generated by the liability occurred in the past years the insurance company doesn't know about. This is achieved using computing development factors in run-off triangles.

In the first stage the run-off triangles are built through identifying known prejudice in every year of development for every year of origin of the events and introducing them into a table (with the shape of Table 1). The values above the diagonal represent prejudice incurred in year x (year of origin) and paid after y years. Table 2 contains the data recorded by the insurance companies between 2004-2008 for motor vehicles insurance, data referring to the prejudice incurred in the year of origin and paid with a delay of 5 years at most (developments years). Thus, the first line of the run-off triangle contains the prejudice paid with a delay of 0, 1, 2, 3 or 4 years for events from 2004. The sum of values on the diagonal represents the total amount paid in 2008 for events which were reported to the insurer between 2004-2008.

Table 1

The run-off triangle for reported events depending on the year of developments

– millions of ROL –

Year of origin	Delay in paying the prejudice (year of developments)				
	0	1	2	3	4
2004	14,994,009.2	1,936,197.14	680,265.54	98,182.33	48,260.88
2005	31,465,290.92	5,820,101.68	805,882.48	1,211,588	?
2006	51,570,088.63	8,905,005.56	1,526,465.83	?	?
2007	45,062,868.48	6,834,431.18	?	?	?
2008	23,603,987.8	?	?	?	?

According to the basis chain-ladder method in the next step the values of the prejudice for each year of origin are cumulated, depending on each development year. The first column in Table 2 is identical to the first column in Table 1 and beginning with the 2nd column

the data are summed up obtaining the values of cumulated prejudice. Thus, the data in each cell on the diagonal represents the value of all prejudice paid in the period of time between their apparition and 2008 and which appeared in the year of origin.

Table 2

The run-off triangle for reported events cumulated for the years of developments

– millions of ROL –

Year of origin	Delay in paying the prejudice (year of developments)				
	0	1	2	3	4
2004	14,994,009.2	16,930,206.34	17,610,471.88	17,708,654	17,756,915.09
2005	31,465,290.92	37,285,392.6	38,091,275.08	39,302,863	?
2006	51,570,088.63	60,475,094.19	62,001,560.02	?	?
2007	45,062,868.48	51,897,299.66	?	?	?
2008	23,603,987.8	?	?	?	?

For a better estimation of the incurred but not reported reserve we must take into consideration the reported but not settled reserve because the evolution of the balance of this reserve influences the value of the company's future liability. When a prejudice is reported, it is moved in this reserve and when payments are made for that event, the reserve is diminished with the values of the payments and what remains in reserve at a given time expresses the company's liability to the insured which incurred the respective prejudice. The main hypothesis of the chain-ladder method consists of assuming that in the past there was a stable evolution of both the prejudice and the balance of the reserve of reported events and that this stability will be kept in the future. There

are situations in which the evolution of the reported reserve's balance or of the paid amounts is not uniform and this fact distorts the estimation of future liability of the insurer regarding the incurred but not reported prejudice. In these cases either the developments factors are adjusted or the paid amounts and reported reserve prejudice are adjusted. In the second case, the insurer may exclude very large prejudice, the cases that are included in the reported reserve and which were rejected later on or other cases for which the company has a pertinent motivation. The run-off triangle which contains the values of the reported ones in balance at the end of each year of development for insured events incurred in every year of origin has the following form (Table 3):

Table 3

The run-off triangle for reported events in balance

– millions of ROL –

Year of origin	Delay in paying the prejudice (year of developments)				
	0	1	2	3	4
2004	1,501,400.2	1,687,020.4	1,750,047.8	1,760,345	1,778,701
2005	3,247,029.2	3,429,349.6	3,578,175.8	3,634,283	?
2006	5,231,088.3	6,000,504.1	6,100,230.2	?	?
2007	4,702,868.8	5,007,259.6	?	?	?
2008	2,104,587.8	?	?	?	?

The next stage consists of creating a new delay table (Table 4) in which we introduce the accumulated values of paid prejudice for each year of delay to which we add the balance of reported events. Thus, $C_{0x,y}$ for example, represents the prejudice incurred in 2000+x accumulated to the year of development y including it plus the balance of reported events for the same moment. From this table we compute the development factors $D_{x,y}$ after the relationships:

$$D_{0,1} = \frac{C_{04,1} + C_{05,1} + C_{06,1} + C_{07,1}}{C_{04,0} + C_{05,0} + C_{06,0} + C_{07,0}}$$

$$D_{1,2} = \frac{C_{04,2} + C_{05,2} + C_{06,2}}{C_{04,01} + C_{05,1} + C_{06,1}}$$

$$D_{2,3} = \frac{C_{04,3} + C_{05,3}}{C_{04,02} + C_{05,2}}$$

$$D_{2,3} = \frac{C_{04,4}}{C_{04,03}}$$

It is observed that the development factors represent the degree of growth of prejudice which were paid by the company, from one year to the another.

The value of the prejudice which are going to be reported in the future ($C'_{0x,y}$) is computed by multiplying the last accumulated value for the prejudice occurred in the year of origin x with the development factor corresponding to the y year of delay:

$$C'_{08,1} = C_{08,0} \times D_{0,1} \quad C'_{08,2} = C'_{08,1} \times D_{1,2}$$

$$C'_{08,3} = C'_{08,2} \times D_{2,3} \quad C'_{08,4} = C'_{08,3} \times D_{3,4}$$

$$C'_{07,2} = C_{07,1} \times D_{1,2} \quad C'_{07,3} = C'_{07,2} \times D_{2,3}$$

$$C'_{07,4} = C'_{07,3} \times D_{3,4}$$

$$C'_{06,3} = C_{06,2} \times D_{2,3} \quad C'_{06,4} = C'_{06,3} \times D_{3,4}$$

$$C'_{05,4} = C_{05,3} \times D_{3,4}$$

The run-off triangle built based on the development factors is presented in Table 4:

Table 4

The run-off triangle model

– millions of ROL –

Year of origin	Delay in paying the prejudice (year of developments)				
	0	1	2	3	4
2004	$C_{04,0}$	$C_{04,1}$	$C_{04,2}$	$C_{04,3}$	$C_{04,4}$
2005	$C_{05,0}$	$C_{05,1}$	$C_{05,2}$	$C_{05,3}$	$C'_{05,4}$
2006	$C_{06,0}$	$C_{06,1}$	$C_{06,2}$	$C'_{06,3}$	$C'_{06,4}$
2007	$C_{07,0}$	$C_{07,1}$	$C'_{07,2}$	$C'_{07,3}$	$C'_{07,4}$
2008	$C_{08,0}$	$C'_{08,1}$	$C'_{08,2}$	$C'_{08,3}$	$C'_{08,4}$
Development factors		$D_{0,1}$	$D_{1,2}$	$D_{2,3}$	$D_{3,4}$

The value of the incurred but not reported reserve at the end of 2008 is computed through deducting the last known values for the last years of origin from the cumulated value of the reserve at the date of the calculation. Concretely, the value of IBNR computed on 31st of December 2008 is:

$$IBNR_{2008} = C'_{08,4} - C_{08,0} + C'_{07,4} - C_{07,1} + C'_{06,4} - C_{06,2} + C'_{05,4} - C_{05,3}$$

In case of the insurance company for which we wish to determine the value of the incurred but not reported reserve (variant a), the development table of the reported events as well those of unreported ones present the accumulated prejudice for years of development (Table 5 – variant a):

Table 5

The table of reported and unreported prejudice presented as a sum of development years – variant a
– millions of ROL –

Year of origin	Delay in paying the prejudice (year of developments)				
	0	1	2	3	4
2004	16,495,409.4	18,617,226.74	19,360,519.68	19,468,999	19,535,616.09
2005	34,712,320.12	40,714,742.2	41,669,450.88	42,937,146	43,084,063.41
2006	56,801,176.93	66,475,598.29	68,101,790.22	69,637,428	69,875,705.95
2007	49,765,737.28	56,904,559.26	58,408,139.47	59,725,194	59,929,554.95
2008	25,708,575.6	29,772,011.56	30,558,672.74	31,247,745	31,354,665.18
Development factors		1.158057608	1.026422843	1.022549	1.00342169

The reserve for incurred but not reported which the company must come up with at the end of 2008 is $IBNR_{2008} = 10591919$ mil. ROL. In the future, the insurance company is expecting to face prejudice occurred in the past about it knows nothing about in the present of approximately 10591919 mil. ROL. This amount can be settled due to the reserve it made up.

Another variant of the chain-ladder method used in insurance practice (variant b) assumes not taking into consideration the reserve balance, the methodology of calculus being similar to the one previous

presented. The use of various methods for determining the incurred but not reported reserve leads to various results, sometimes registering significant differences between them, which is normal as the main aim is estimating a value which depends on a lot of factors, some of them unquantifiable. If we don't take into consideration the reported reserve and wish to determine the value of incurred but not reported reserve, then the development table (Table 6 – variant b) of the reported and unreported events in variant b will be different from the one in variant a:

Table 6

The table of reported and unreported prejudice presented as a sum of development years – variant b
– millions of ROL –

Year of origin	Delay in paying the prejudice (year of developments)				
	0	1	2	3	4
2004	14,994,009.2	16,930,206.34	17,610,471.88	17,708,654	17,756,915.09
2005	31,465,290.92	37,285,392.6	38,091,275.08	39,302,863	39,409,973.76
2006	51,570,088.63	60,475,094.19	62,001,560.02	63,459,464	63,632,408.02
2007	45,062,868.48	51,897,299.66	53,260,501.15	54,512,868	54,661,430.12
2008	23,603,987.8	27,479,760.44	28,201,579.31	28,864,711	28,943,374.99
Development factors		1.164199909	1.026267291	1.023514	1.002725271

The incurred but not reported reserve the insurance company must constitute through applying variant b of chain-ladder method at the end of 2008 is 9841477 mil. ROL. It is observed that the result obtained with the second variant is similar to the one obtained in the first case, being lower than it because we didn't take into consideration the reported events reserve. Choosing the method for determining the incurred but not reported reserve remains at the insurer's freedom to decide and is influenced by financial objectives as well as its attitude towards risk. In the case of our company it is recommended that the determined reserve should be constituted using the first method as it takes into consideration the incurred but not reported reserve and the risk the insured

is subjected to from the future prejudice coming from past events the insurer knows nothing about is lower.

Insurers in Romania make up this reserve for a few years now through different methods they embraced and in the present, the legislation states the use of a form of the chain-ladder method, just in cases of auto civil responsibility. For other classes of insurance, the insurance companies still have the possibility to choose the calculus method of the incurred but not reported reserve. The correct estimation of the incurred but not reported reserve is very important for the insurer as it allows him, besides knowing what to expect in the future, to have a bigger and more realistic picture of the company's financial status.

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On the Dynamic Relationships between the Non-profit and Public Providers of Welfare Services in European Union

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***Abstract.** Economic activity in a mixed economy is shared among different kinds of organizations: private for-profit, private non-profit and governmental organizations, which are closely interdependent among them. For a long time the private non-profit sector has been considered as a marginal sector that rises only in the wake of the failure of both the market and government. Indeed, it is likely that there exist important spillovers among non-profit, for-profit and public sectors, particularly in the provision of welfare services. This paper analyses the way European countries deal with the provision of welfare services. Univariate and multivariate econometric tests will be performed in order to search for the existence of a common European model of welfare services provision based on the relationship between non-profit and public providers. The main evidence provided by this analysis does not fully support the existence of a common and unique European model of welfare services provision. Rather, three different models or patterns of relationship between the non-profit and public welfare sectors are evident in Europe.*

Keywords: public economics; non-profit sector; welfare services; European Union; cluster analysis.

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JEL Codes: H41, L31, I0, C31, N34.

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Introduction

Economic activity in a mixed economy is shared among different kinds of organizations: private for-profit, private non-profit and governmental organizations. Although many industries are mixed, only recently researchers have been paying attention to the forces influencing the size, composition and financial structure of private non-profit organizations (Brice, 2006, Salamon, Anheier, 1998, Merièková, 2002). For a long time the private non-profit sector has been considered as a marginal, remedial sector that rises only in the wake of the failure of both the market and state (Kuvíková, 2004, Weisbrod, 1998). During the past a huge interest has begun to develop around the topic of non-profit sector. Actually, an increasing number of governments consider the non-profit sector as a strategically important actor in the mid-way between public and private sectors. Indeed, it is likely that there exists scope for important spillover among non-profit, for-profit and governmental sectors, particularly in the provision of welfare services (Salamon, Sokolowski, List, 2003). For the purpose of this study, we focus on education, health and social services because they share the typical characteristics of the public good and, at the same time, they are the most important functions performed by the non-profit sector acting as public provider.

The theoretical framework followed by this paper is the classical economics one. We start with the assumption that market is inefficient in the production of public and quasi-public goods and services (Stiglitz, 1988, Varian, 1998). Then, government

must intervene in the market economy in order to meet the unsatisfied demand (Wolf, 1998). Anyway, government intervention is not free of charges. It brings its own costs for corruption, bureaucracy and malfunctions (Muller, 2006, Uramova, 2001, Cullis, Jones, 1992). A third sector might intervene and correct the inefficiency of both market and government (Anheier, Toepler, 1999, Weisbrod, 1998). Given the existence of an abundant and often controversial literature in the field of the non-profit sector, we concentrate on the main non-profit sector's economics theories, which focus on the relationships between public and non-profit providers of welfare services. We rely on the heterogeneity, interdependence, trust and social origin theory as a theoretical foundation of our empirical analysis (Salamon, Anheier, 1998, Matsunaga, Yamauchi, 2004, Marcuello, Salas, 2001).

The research sample includes 17 European countries. Data for the public and non-profit organizations providing educational, health and social services in Europe are taken from Raguseo and Kuvikova (2008). Several empirical tests will be performed in order to search for the existence of a common European model of welfare services provision based on the relationship between non-profit and public providers. As first step, the empirical analysis employs simple and multiple linear regressions performed separately and simultaneously for each welfare service industries. As second step, in order to better identify the existence of potential relationships between public and non-profit providers, the empirical analysis employs a cluster technique for preliminarily detecting

similarity and dissimilarity in the way European countries deal with the provision of welfare services.

To the best of our knowledge, this is the first attempt in the literature that empirically tests the most well known non-profit sector's economics theories combining diverse econometric techniques. The analysis also focuses on the financial relationship between the public and non-profit sectors as a crucial explanatory variable.

The paper is organized as follows. Section 1 reviews the main non-profit sector's economic theories refereed in this study. Section 2 illustrates the empirical model. Section 3 shows and discusses the results. The last section concludes.

1. The theory

In order to develop a model that describes the relationship between public and private non-profit providers of welfare services in Europe, we rely on the main non-profit sector's economic theories.

In the field of the non-profit sector, the leading theory is the heterogeneity theory (Weisbrod, 1988). According to this theory, the non-profit sector intervenes in the economy to meet the unsatisfied demand for public goods and services remaining as a consequence of failures of both the market and the state. The need for non-profit provisions would decline to the extent that the government provides a larger quantity of public services (Šebo, 2005).

However, the substitutive relationship between public and private non-profit providers of welfare services is not the only way to analyze the linkages between the two

sectors. In fact, next to the potential sources of conflict, there are also important elements of potential partnership. Salamon and Anheier (1998) have formulated an alternative method of analysis, known as the interdependence theory. According to this theory, a complementary relationship can be thought between the non-profit sector and the state in addressing public problems.

These two theories already provide some specific hypotheses useful to identify the dimensional (substitutive or complementary) relationship between the public and non-profit providers of welfare services in Europe.

For the purpose of this study, we also pay attention to the non-profit sector's financial sources. Non-profit organizations can receive income from several sources: Government subsidies, private voluntary giving (i.e. philanthropy), and income generated through their own activity (i.e. membership fees and charges for services).

The heterogeneity theory offers interesting assumptions in terms of financial relationship between the public and non-profit sectors. Indeed, because the non-profit sector is viewed as a substitute of the public sector in the provision of welfare services, there should not be any reason to expect the income of non-profit organizations to be financed through governmental subsidies. This theory predicts that the non-profit sector would be financed mostly by private voluntary giving.

By contrast, the interdependence theory views the public and non-profit sectors as complementary in the provision of the basic welfare services. Thus, in order to stimulate the production of public welfare services,

government will support the non-profit sector not only politically but also financially. According to this theory, government is an important source of financial aid for the non-profit sector (Salamon, Sokolowski, Anheier, 2000).

A third theory finds the rationale of non-profit sector in another form of market failure, arising from the existence of asymmetric information often facing consumers (Bryce, 2006, Gronbjerg, Paarlberg, 2001). When consumers cannot detect information asymmetry at low cost, they will seek alternative for trust in the quality of services provided. One such alternative is the non-profit sector. Because the non-distributing constraint, the prohibition of distribution of profits to owners may be perceived as a sign of trustworthiness, which eliminates much of the information asymmetry problem, non-profit organizations are preferred. According to the trust theory, the services provided through the non-profit sector would be purchased from the market if sufficient trust were present. It follows that the financing of the provision of these services through the non-profit sector is likely to take a more commercial form. This suggests that the non-profit sector would be able to ensure the main share of income from its own activity, i.e. fees and service charges.

A fourth non-profit sector theory that we want to include in our theoretical framework is the social origin theory. This theory identifies diverse types of public/non-profit welfare regimes, each characterized not only by a specific role of the state in the provision of welfare services but also by a typical

relationship between the non-profit sector and the public sector. The leading contribution to this theory has been given by Esping-Andersen (1990). This theory differentiates welfare regimes in terms of two key dimensions: the size of the public welfare sector and the size of the non-profit sector. The main prediction is the existence of different types of public/non-profit welfare regimes among European countries because the public and non-profit sectors are perceived as complements in the corporatist countries but as substitutes in the social democratic and liberal countries.

2. The model

Our model employs univariate and multivariate econometric tests against cross-sectional data for 17 European states. The sample countries includes Belgium, Austria, Ireland, Netherlands, Spain, Italy, United Kingdom, Germany, Romania, France, Poland, Finland, Czech Republic, Hungary, Norway, Slovakia and Sweden. The statistical data are the same as for Raguseo and Kuvikova (2008).

Our model of analysis follows a two-step approach to estimate the relationships between the public and non-profit welfare services providers in Europe. Preliminarily, we operationalize the concept of sector “size” in terms of relative expenditure as in Raguseo and Vlcek (2008). Expenditure data – for both non-profit and public sector – are expressed as a share of the Gross Domestic Product (GDP) in each country in order to remove any scale effect among countries.

As first step, the analysis employs ordinary least square (OLS) regression equations in order to measure the strength of the relationship between the two sectors. The equations are in Cobb-Douglas form and all variables are converted in natural logarithms so that the resulting equations are linear (Johnston, Dinardo, 1997). Following Raguseo and Kuvikova (2008) we use a pooled model, which allows for either fixed or random effects (Greene, 1997). The model for the case of k explanatory variables in cross-sectional observations by country i for each industry j can be stated as:

$$y_{ij} = \alpha_j + \sum_{k=1}^4 \beta_k \times x_{k,ij} + \varepsilon_{ij} \quad (1)$$

As second step of the analysis, in order to better identify the existence of potential relationships between public and non-profit welfare sectors among European countries, we employ a cluster technique for preliminarily detecting similarity and dissimilarity in the way European countries deal with the provision of the welfare services. Indeed, cluster analysis develops tools and methods useful when we want to see if some natural groups exist when considering objects in a data set. Our goal is to find natural groups (clusters) for which the objects (countries) within each group are similar, but the groups are dissimilar to each other. According to Hardle and Simar (2003), the starting point of a cluster analysis is a data matrix $D(n \times p)$ of n objects with p variables. Our variables include: the non-profit sector size (NPS), the size of the public sector (PUB), the government subsidies (GOV), the private philanthropy donations (PHI) and the income generated by non-profit

sector through its own activity (OWN) in each country. In our analysis, we apply an agglomerative hierarchical clustering, which typically start with n clusters, one for each object, and end with a single cluster containing all n objects. The graphical representation, so-called dendrogram, displays the objects, the sequence of clusters and the distances between the clusters. The larger the distances, the more heterogeneous the clusters. Since cluster analysis attempts to identify the objects that are similar and group them into clusters, several techniques are based on indexes of similarity between each pair of observations. A convenient measure of similarity is the distance function between two observations. The most common distance function is the Euclidean distance between two vectors $x = (x_1, x_2, \dots, x_p)$ and $y = (y_1, y_2, \dots, y_p)$, defined as:

$$d(x, y) = \sqrt{(x - y)'(x - y)} = \sqrt{\sum_{j=1}^p (x_j - y_j)^2} \quad (2)$$

For our model, based on the Ward's algorithm, it is necessary to take the square of the Euclidean distance:

$$d^2(x, y) = (x - y)'(x - y) = \sum_{j=1}^p \|x_j - y_j\|^2 \quad (3)$$

Moreover, the agglomerative hierarchical clustering technique based on the Ward's method implies that given n objects with p variables, the sum of squares within clusters where each object forms its own group is zero. The Ward's method is also known as Incremental Sum of Squares because its algorithm for forming clusters joins objects based upon minimizing the minimal increment in the error sum of squares (Hardle, Simar, 2003). The

dendrogram itself is constructed based on the minimum increase in the error sum of squares. The dissimilarity within each group is measured by the inertia inside the group, defined as:

$$I_R = \frac{1}{n_R} \sum_{i=1}^{n_R} d^2(x_i, \bar{x}_R) \quad (4)$$

where

\bar{x}_R is the center of gravity (mean) over the groups. I_R clearly provides a scalar measure of the dispersion of the group around its center of gravity. When two objects or groups (for instance, P and Q) are joined, the new group (P + Q) will have a larger inertia $I_{(P+Q)}$. It can be shown that the corresponding increase of inertia is given by:

$$\Delta(P, Q) = \frac{n_P \times n_Q}{n_P + n_Q} d^2(P, Q) \quad (5)$$

In this, the Ward's method is defined as an algorithm that joins the groups that give the smallest increase in $\Delta(P, Q)$. The process is continued until all objects are joined.

Timn (2002) argues that the scale of measurement of the variables is an important consideration when using the squared Euclidean distance. Thus, changing the scale can affect the relative distances among the objects. In order to eliminate the dependence of the analysis on the units of measurement, we standardize each variable in the usual way by subtracting the mean and dividing by the standard deviation of the variable.

Finally, since we wish to determine the optimal number of clusters that provides the best fit to the data, our approach is to look for the largest changes in the distances at which clusters are formed. A formalization of this procedure is proposed by Rencher (2002) who suggests choosing the number of clusters given by the first stage in the dendrogram at which:

$$\alpha_j > \mu_\alpha + k \times s_\alpha \quad j = 1, 2, \dots, n, \quad (6)$$

where

$\alpha_1, \alpha_2, \dots, \alpha_n$ are the distance values for stages with $n, n-1, \dots, 1$ clusters, μ_α and s_α are the mean and standard deviation of the α 's, and k is a constant.

3. Empirical results

Table 1 shows a summary of the main statistics derived from the estimation regression model when it is performed separately against disaggregated data for the overall welfare industry and for each single industry. The estimated parameters show a general relationship between public (PUB) and non-profit (NPS) providers of welfare services that appear basically positive. Nevertheless, only in the industry of the social services, it is statistically significant at 5% level. The sign of the regression coefficients on the government subsidies (GOV) philanthropy (PHI) and own income (OWN) are mostly positive even if not statistically significant for several specifications.

Table 1

The overall welfare sector and the single industries estimations

Regressors	Overall		Education		Health		Social services	
	NPS	NPS	NPS	NPS	NPS	NPS	NPS	NPS
α	-4,786 (0,338)	-18,33 (0,106)	-2,334 (0,392)	-9,062 (0,274)	-4,437 (0,256)	-20,802 (0,185)	-6,42** (0,027)	-29,84** (0,015)
PUB	1,579 (0,293)	0,889 (0,488)	1,123 (0,491)	2,174 (0,174)	1,897 (0,387)	-1,144 (0,702)	1,991** (0,049)	1,420 (0,110)
OWN		0,143 (0,870)		-0,104 (0,836)		0,190 (0,809)		0,918 (0,302)
GOV		3,205* (0,066)		1,443 (0,215)		4,277* (0,065)		3,923** (0,032)
PHI		1,005 (0,405)		-0,014 (0,983)		1,472 (0,456)		2,259 (0,125)
R ²	0,073	0,592	0,032	0,412	0,050	0,509	0,234	0,646
F-sig	0,293	0,021	0,491	0,143	0,387	0,057	0,049	0,010

Dependent variable: NPS

In parentheses t significance

* 10% significant, ** 5% significant, *** 1% significant

Source: Raguseo and Kuvikova, 2008.

Table 2 presents the results from the estimation of the pooled model simultaneously performed for the three welfare industries with and without fixed effects.

Table 2

The pooled estimations

Regressors	Pooled Model without fixed effects		Pooled Model with fixed effects	
α	-1,197* (0,094)	-9,106* (0,073)	-4,448** (0,015)	-11,653** (0,014)
PUB	0,192 (0,559)	0,367 (0,233)	1,758** (0,042)	1,684** (0,020)
OWN		-0,060 (0,850)		-0,158 (0,584)
GOV		1,953** (0,014)		1,957*** (0,008)
PHI		0,134 (0,804)		0,164 (0,741)
EDU_ α			1,062	1,099
HEA_ α			0,254	-0,020
SOC_ α			-1,316	-1,079
R ²	0,007	0,333	0,120	0,474
F-sig	0,559	0,001	0,106	0,000

Dependent variable: NPS

In parentheses t significance

* 10% significant, ** 5% significant, *** 1% significant

Source: Raguseo and Kuvikova (2008).

The coefficients on public sector size (PUB) it is statistically significant at 5% level only when a fixed effect estimator is applied, which suggests that internal industry characteristics strongly influence the significance of the relationship between the non-profit and the public welfare sector in Europe. It is quite reasonable to think that

unobservable variability across welfare industries also appears as an important factor influencing the way these sectors are mutually interdependent (Nemec, 2008). In the pooled model, the coefficients on private donations (PHI) and own income (OWN) are not statistically significant. The coefficient on government subsidies (GOV) is the only to be statistically significant at 1% level in both models.

From the results so far, there is not evidence on the existence of a common model for dealing with the provision of welfare services among European countries. The interdependence theory is a quite solid theoretical framework for explaining the relationship between non-profit and public providers of welfare services in Europe. At the same time, the analysis does not deny the robustness of the heterogeneity and the trust theory, which predict a positive impact of the philanthropic giving and commercial income on the size and development of the non-profit sector. In fact, for the European countries, it seems to exist a significant complementarity between these non-profit sector's economic theories (Raguseo, Vlcek, 2008). Moreover, the non-profit sector cannot be simply interpreted as the outcome of a linear regression equation on more explanatory variables. Rather, other more complex social, political, cultural and historic forces may play an important role.

In order to check the validity of the previous results, it is feasible to verify as predicted by the social origin theory whether there are no groups of countries with different welfare models in our sample. Since, the non-profit sector goes well beyond the linear relation that we have drawn so far, we employ a cluster analysis technique for preliminarily detecting similarity and dissimilarity in the way European countries deal with the provision of welfare services. This will help to better identify the existence of potential relationships between public and non-profit welfare sectors among European countries. As pointed out in the previous section, our cluster technique employs the Ward's method with the squared Euclidean distance as distance function. The values are transformed into z-score in order to make the selected variables comparable among them. Needless to say, the variables used in the cluster analysis are the same employed in the regression analysis. The dendogram in Figure 1 shows the existence of three optimal clusters on the highest interpretable measure of dissimilarity among European countries. The first cluster is composed by the Nordic countries along with France, Austria and Germany. Then we can identify a small group of countries represented by Belgium, the Netherlands and Ireland. The third sub-group is composed by the Central-Eastern European countries plus Spain, Italy and United Kingdom.

* * * * * H I E R A R C H I C A L C L U S T E R A N A L Y S I S * * * * *

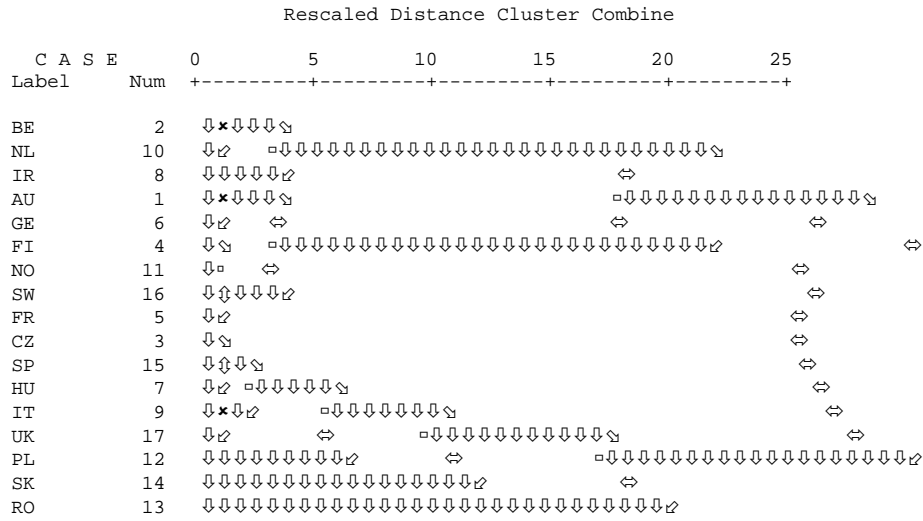


Figure 1. Dendrogram using the Ward's Method

Source: author's elaboration.

Table 3

Cluster membership	
Case	3 Clusters
1:AU	1
2:BE	2
3:CZ	3
4:FI	1
5:FR	1
6:GE	1
7:HU	3
8:IR	2
9:IT	3
10:NL	2
11:NO	1
12:PL	3
13:RO	3
14:SK	3
15:SP	3
16:SW	1
17:UK	3

Source: author's elaboration.

Even if the resulting clusters are far from being absolutely distinct, this classification offers a helpful tool to distinguish a variety of regimes of non-profit/public welfare behavior and to combine the relevant non-profit's economic theories into an explanation of the size and development of

the non-profit sector in Europe. As showed in Table 3, three different clusters or patterns of relationship between public and non-profit providers of welfare services are evident in Europe. The following classification reviews some of the main features of the non-profit sector in these subgroups of countries and emphasizes some of the key factors that may help to explain the relationship between public and non-profit providers of welfare services in Europe.

The first cluster represented in our data by the cases of the Nordic countries with France, Germany and Austria is characterized by a relatively large public welfare sector and relatively small non-profit welfare sectors, at least as measured in terms of expenditure. This model, in the literature, has also been defined as the social democratic regime by Esping-Andersen (1990). In the social democratic regime, nevertheless, a small non-profit welfare sector does not necessarily mean a small non-profit sector

as a whole. This is certainly the case in Sweden and Norway where a very substantial network of volunteer-based non-profit organizations engaged mostly in expressive rather than welfare service functions turns out to exist alongside a highly developed public welfare state. Because of

the volunteer workforce also the revenue structure of the Nordic third sector differs considerably from the rest of all the other European countries. Philanthropy (most of it in contributions of time) plays a very important role in supporting the fiscal structure of the non-profit sector in these countries

Table 4

The social democratic cluster						
	Finland	Sweden	Norway	France	Germany	Austria
Public Workforce ^{(1), (5)}	50.52	42.16	69.75	55.38	76.56	68.13
Non-profit Workforce ^{(1), (5)}	2.97	3.98	4.03	4.26	3.30	2.74
Workforce composition: ⁽²⁾						
Service	0.43	0.23	0.35	0.56	0.61	0.85
Expressive	0.57	0.77	0.65	0.44	0.39	0.15
Public Expenditure ^{(3), (5)}	34.63	38.27	30.67	38.27	32.32	34.49
Non-profit Expenditure ^{(3), (5)}	2.38	1.10	1.40	2.70	2.80	2.19
Revenue Structure: ^{(4), (5)}						
Government	35.70	43.08	44.38	44.31	55.66	53.14
Philanthropy	34.67	35.83	32.33	41.43	27.17	20.45
Own income	29.44	21.28	23.83	14.43	17.09	26.43

⁽¹⁾ As share of the active population.

⁽²⁾ As share of the total non-profit sector workforce.

⁽³⁾ As share of the country's GDP.

⁽⁴⁾ As share of the total income.

⁽⁵⁾ Related to the welfare industries.

Source: adapted from Johns Hopkins comparative non-profit sector project.

The second cluster is represented in our data by Belgium, the Netherlands, and Ireland. In these countries, the state has either been forced or induced to make common cause with non-profit organizations, albeit for different historical reasons. Such a model, also well known as corporatist regime, stresses the concept of coexistence between an extensive government welfare expenditure and a sizeable non-profit welfare sector. In this Western European model the non-profit welfare sector is generally quite large. Anyway, the largest part of the workforce

is paid. The ability of the non-profit welfare sector to support this workforce is due to the substantial levels of public sector support available to it. In these countries, the highest share of the non-profit sector revenue comes from the public sector, well above the European average. Most of the non-profit organizations in these countries are engaged in service functions, particularly welfare services such as education, social services, and health. These features reflect the distinctive way in which the welfare state evolved in the continental European countries. The result has been a model of

extensive partnership between the state and the third sector. This can be thought as a distinctive Western European-style of welfare partnership pattern characterized by a large non-profit sector composed mostly by paid employees, heavily engaged in welfare service provision, and extensively financed through government subsidies.

Table 5

The Western European-style of welfare partnership cluster

	Belgium	Netherlands	Ireland
Public Workforce ^{(1), (5)}	n.a.	62.71	48.45
Non-profit Workforce ^{(1), (5)}	6.10	8.06	5.82
Workforce composition: ⁽²⁾			
Service	0.86	0.75	0.85
Expressive	0.14	0.25	0.15
Public Expenditure ^{(3), (5)}	29.8	26.74	20.16
Non-profit Expenditure ^{(3), (5)}	6.64	9.45	6.89
Revenue Structure: ^{(4), (5)}			
Government	69.61	67.23	63.17
Philanthropy	18.09	21.61	27.83
Own income	12.15	11.09	9.00

⁽¹⁾ As share of the active population.

⁽²⁾ As share of the total non-profit sector workforce.

⁽³⁾ As share of the country's GDP.

⁽⁴⁾ As share of the total income.

⁽⁵⁾ Related to the welfare industries.

Source: adapted from Johns Hopkins comparative non-profit sector project.

Finally, the Central and Eastern European (CEE) cluster represents an interesting mix of the previous two. The implementation of the communist regime after the World War II resulted in a substantial increase in the welfare services directly provided by the state. At the same

time, the governments of these countries supported only few private organizations that were instrumental to their official policies, while suppressing those that might challenge the government's hegemony. In relatively recent time, also governments in the CEE countries have allowed the non-profit organizations to provide public welfare services. The right conditions for the development of the non-profit sector in CEE were built only after the breakdown of the communist regime. Our analysis shows the Central and Eastern European countries to occupy a borderline between the corporatist and social-democratic regimes. Indeed, for the CEE countries a high share of non-profit organizations perform mostly expressive functions as in the social-democratic regime and the workforce employed is generally paid as in the corporatist regime. This is likely a consequence of the social welfare policies of the Soviet-era, which relied on direct provision of the most important welfare services by the state and tolerated only a limited private non-profit sector but largely for recreational, and professional purposes (Kuvíková, 2004, Kačírková, 2006).

One particular feature of the non-profit sector in Central and Eastern Europe is the relatively high level of reliance on membership fees and services charges on the part of the non-profit organizations. Paradoxically, despite its socialist past, the commercial income constitutes a larger share of the revenues of the non-profit sector in these countries than in any other European countries. One explanation for this may be that when state enterprises were transformed

into private firms, they turn off into non-profit organizations and continued to provide many of the health and social services that they previously provided to their workers. At the

same time, also their workers continued some degree of financial support to those activities and this support shows up in our data as own income.

Table 6

The Central and Eastern European cluster

	Slovakia	Czech Republic	Hungary	Poland	Romania
Public Workforce ^{(1), (5)}	51.79	47.60	40.09	14.49	22.45
Non-profit Workforce ^{(1), (5)}	0.45	1.12	0.62	0.45	0.45
Workforce composition: ⁽²⁾					
Service	0.34	0.42	0.40	0.49	0.58
Expressive	0.66	0.58	0.60	0.51	0.42
Public Expenditure ^{(3), (5)}	22.03	23.65	27.71	28.62	20.51
Non-profit Expenditure ^{(3), (5)}	0.22	0.63	0.70	0.48	0.18
Revenue Structure: ^{(4), (5)}					
Government	48.09	41.15	31.68	21.83	24.72
Philanthropy	12.09	30.86	33.78	26.10	64.13
Own income	39.56	27.95	35.17	52.29	11.38

⁽¹⁾ As share of the active population.

⁽²⁾ As share of the total non-profit sector workforce.

⁽³⁾ As share of the country's GDP.

⁽⁴⁾ As share of the total income.

⁽⁵⁾ Related to the welfare industries.

Source: adapted from Johns Hopkins comparative non-profit sector project.

From the analysis so far, what seems clear is that not only the set of theories we are analyzing helps to explain the differences in the non-profit welfare sector and the apparent anomalies in the relationship between the public and the non-profit welfare sector across European states, but also this theoretical framework helps us account for the patterns of the non-profit finance.

4. Conclusion

The nature of our results suggests that among European countries do exist differences in the relative size of their non-profit and public welfare sectors. Also within

each sector, estimates across industries differ due to unobserved variability. However, between countries with the same structure of the welfare industries there are not significant differences in the way they deal with the provision of welfare services. The regression analysis found fundamentally positive signs of the coefficients on public sector (PUB), government subsidies (GOV) and philanthropy (PHI), confirming that it seems quite hard to support the robustness of a specific theory over another. The main research findings showed that there are important elements of potential cooperation and partnership between the public and non-profit sectors in the provision of welfare services. At the same time, we did not

completely reject a positive effect of the private philanthropic giving and fees on the size of the European non-profit welfare sector. The evidence provided by this analysis does not fully support the existence of a common and unique European model of welfare services provision among the sample countries.

Rather, three different models or patterns of relationship between the non-profit and public welfare sectors are evident in Europe. Although, the resulting countries sub-groups are far from being completely specific, this classification fits well to the existing non-profit sector theories we have taken into examination, and, in turn, it highlights some of the key elements that may influence the relationship between the public and non-profit providers of welfare services in Europe.

We must warn the reader that this analysis is not deprived of the possibility of errors. Nevertheless, we hope that it will provide a useful support and incentive toward a more sophisticated test of the existing economic theories of the non-profit sector. This would help to understand what the true determinants of the size and scope of this sector really are. And, due to the increasing importance of this topic, this would represent a really valuable result.

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Reconfiguring the Financial Markets

■

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***Abstract.** The debut of the new millennium is marked by the increased economic and social imbalances. An important task of economic science is to identify the causes and factors that contributed to the radical transformation of the unfolding conditions of economic activity. The existence of different perspectives to approach the new realities may offer greater opportunities for decrypting the conditions that generated so far unknown developments, as well as for shaping solutions to promote new paths of progress and civilization.*

The defining with profound implications on the economy and society is represented by the globalization. From this perspective, we have analysed the new dimensions of capital accumulation and economic growth in the context of deregulation and liberalization of the international capital movements. In this context, we have noticed the increasing influence of the financial markets on the economy, the tendency to remove the finances from the real economy requirements, the growing role of external financing using more volatile capital goods, increased competition regarding the access to financing, the significant increase of power of the international capital markets whose characteristic is represented by the increased instability, the implications of the investors' obsession with an excessive profitableness of their own funds and the expansion of using sophisticated financial products. Realities of today's financial markets, which are the subject of numerous studies and analysis, have contributed to the association of the arguments that are contesting the thesis on the virtues of self-regulation markets and promoting a new paradigm, within which finances should subordinate the requirements of a balanced and sustained economic growth.

Keywords: cognitive capitalism; the financialization of the economy; financial innovations; volatile capital; institutional investors; derivative products.

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JEL Codes: G01, G18.
REL Code: 11B.

In a world divided by ideological, cultural and religious tensions, the economic confrontations are becoming particularly acute and are subject to the concerns of the decisional factors.

Over the past three decades, capitalism has reached its peak succeeding in imposing its own individualistic representation and behavioural model, to the detriment of collective logic (Kempf, 2009, p. 11).

During this period, the global economy has registered sustained growth periods, but interrupted by financial and economic crisis. The world has become more unstable, more unpredictable and the inequalities have widened.

The new wave of globalization has substantially influenced the economic and financial environment. There is an extensive process of economic, social and political transformations on world scale, which equates with the emergence of a new society and a new capitalism.

The economies of the developed countries have experienced in the last quarter of the twentieth century a profound reorganization. New information and communication technologies have contributed to the radical transformation of the conditions of economic activity. With the new conditions, the economy is placed in the centre of the power issue and contributes to a new configuration of the global geo-economy (Harbulot, 2007, p. 64).

In a deeply reorganized capitalism, the emergence of an economy of immateriality, the modification of the productive model

of the enterprise, on the one hand, and the growing role of externalities, on the other hand, disqualifies the institutional commitments of the industrial Fordist capitalism.

The characteristic of the present stage, represented by cognitive capitalism, is the accumulation based on knowledge and creativity, namely on forms of investment in which the immateriality plays a predominant role (Boutang, 2008, p. 284).

In the countries that joined the neo-liberal value system, the financial globalization has occurred in the climate specific to the 80's. A controversial process challenged by the "losers" and praised by the "winners", financial globalization is approached differently. For the liberal vision, financial globalization is immanently virtuous because it identifies itself with an unprecedented financial liberalization movement. In this light, improving the functioning of financial markets is one of the important consequences of this process. However, for most interventionists, financial globalization entails dangers of instability and financial crises.

Although there are different angles of approach, it is essential to reveal the mechanisms by which globalization affects the process of capital accumulation and the regime of economic increase, as well as the stability of the economic and financial environment. For this it is necessary to analyze some significant processes, such as the tendency to financialize the economy, the

progressive elimination of the financial regulations, accelerating the financial innovation, etc.

Globalization and the financialization of the economy

The genesis and evolution of “the global finance” have considerably marked the defining processes of capital accumulation, economic growth, economic and financial stability, etc. The edifying aspects are highlighted by the problem of the “historic” role of finance in the contemporary capitalism.

During the “thirty glorious years” (1945-1975), the economy and finances were organized on national basis, with an increase interventionism from the State. This is the so-called period of “Fordism”.

Subsequently, the politics considerably intervenes in favour for finances. Starting with 1979, a radical change of the direction occurs in the monetary policy in the USA and other industrialized countries. The fight against inflation, exacerbated by oil shocks, becomes the primary purpose. This results in a spectacular increase in interest rates in the US and global economy, leading to the appreciable modification of the balance of forces between creditors and debtors. Thus, the first victory of the financial capital holders occurs.

During the 80’s, it is applied a new financial system where capital markets acquire priority over bank financing. The rapid increase of the international finance

is also due to financing the public debt, which was the engine of financial modernization performed by the public powers.

As the debt was increasing, the national public treasuries could not rely anymore solely on domestic investors. Hence, the State resorts more and more frequent to international investors, especially institutional investors to purchase national public bonds. Thus, in the 80’s, states have become active players of the institutional financial markets.

Deregulation of the banking and financial sector, relocation of the business and deposit banks, not intermediating bank credits by shifting to market finance represent defining features for the development of international financial activities under the influence of globalization.

The place of the finance in the global economy has changed radically. Financial markets extend their influence on economy having an important role both in financing the market and in risk assessment and redistribution. However, the external financing of the economy is made using more volatile capital, which has led to the emergence and development of industry volatility. Also it should be noted the engagement of the private finance in developing emerging economies, which may represent a major risk factor for the recipient countries. Abrupt withdrawal of private investors is always a crisis accelerator.

Financial globalization has tightened competition for access to finance. International financial players – pension funds, mutual funds and banks – which offer equity focus, have the means to impose on the states. The liberalization of financial markets, considered an important dimension of financial globalization is a phenomenon characteristic to the last quarter of the last century. Financial markets, which for some analysts represent a new form of governmentality, are in the process of fully globalization of their components based on the increasing worldwide integration.

These markets become interdependent on the planetary level as their main variables (interest rate, exchange rate and stock exchange) interact with each other (phenomenon of markets correlation). In an equal extent, stock markets, money markets and hedging markets are subjected to the globalization process. After mid 90's, these markets have seen significant developments that can be compared to the entrance into a new paradigm. The reference point may be represented by the formation of financial bubbles, starting with 1995, as a result of the very rapid increase of the financial assets' price.

As the financial liberalization is intensifying, interest rates are beginning to emancipate themselves from the tutelage of the states; under these circumstances, private powers, represented by big international banking groups, have the possibility and can fix in the most part, the

evolution of these rates. With this considerable power of banks, financial market capitalism dominates today the real economy through exorbitant levies that occur within it. The significant increase in power of international capital markets is accompanied by the development of some "offshore" or "parallel" markets dominated by large banking groups.

The process of financial liberalization has a twofold dimension: the booming market or financial assets and institutionalization of population's savings. The profound instability of these markets, the speculative aspect of the operations that aim at different currencies and financial instruments have made some analysts to link the financial liberalization to the recurrence of business cycles (Aglietta, 2001, p. 92).

Financial globalization had great implications on the international mobility of capital and opened new horizons to investors. Movements of financial capital met considerable values in the last decades and there were abundant savings. The formation of savings massively oriented to the stock market is undoubtedly a feature of the new capitalism. The opening of the borders permitted the rapid transfer of the savings from the areas where they were made (Asia and Europe) to those where the savings were used (especially USA). The result was the very rapid growth of global liquidity and the low level of the long-term interest rates, favourable to credit growth. Then, the rapid growth of credit has been closely linked to the price of assets (the

shares, the late 90's and 2005-2007, and the real estate sector between 2002 and 2006).

The contemporary development of finance can be explained by the emergence of a new stage of capitalism, characterized by a new regime of growth and new forms of accumulation. Under these conditions, cyclical fluctuations are strongly influenced by the prices of financial assets.

The prospect of a new "patrimonial" growth regime resettles the relations between the financial form of organizing the capital and the economic structures of the productive activities. There are close relations of dependency, even domination, between these. Some analysts prefer the thesis of a finance power over the real sphere, while others acknowledge the existence of two distinct spheres.

Within the recent mutation of the capitalism, finance and the perspective of a new "patrimonial" growth regime have an important role. The progress of finance can be explained by the emergence of a new period of capitalism, characterized by new forms of "real" accumulation. Regarding the current orientation of capital accumulation, two analytical perspectives were outlined: on one hand, the analysis is focused on the central actors of capitalism. From this point of view, the capitalist firm is the subject of numerous reconsiderations; on the other hand, the importance of global financial markets is revealed the.

The objective is not only to highlight the current "exuberance" of these markets, but also to illustrate the mechanisms by

which finances actually put a strong pressure on the real economy, with particular implications on the direction of capital accumulation.

Without doubt, globalization has inspired and emphasized the trends of financialization of economies, a notion associated with the concept of financial capitalism. If the signs of financialization are evident (the increase of the bond portfolio held by households, increasing the ratio of funds held between mutual funds and pension and equity capitals of unfinancial corporations, the ratio between financial assets of households and their available income, etc.), there is no consensus yet on the definition of this process.

For some authors, financialization means increased importance of financial markets, players and financial institutions in the functioning of national and international economy (Paulré, 2008, p. 187). The theoretical contributions, which explain the crucial role of finance in the current capitalism, as well as the importance of financial accumulation, plead to a comprehensive vision of finances and point out the role of the financial system in managing risk.

When the financial logic comes first compared to the economic logic, the financialization highlights "the patrimonialisation" of behaviours. On macroeconomic plan, financialization expresses itself through the emergence of the asset economy. Accumulation is financializing

under the effect of the current functioning of financial markets.

Firms' financialization represents a process resulting from the new "governance", which was imposed in the 90's. The concepts of financialization and corporate governance capture the realities within companies, directly related to the new shareholders represented by institutional investors. A large part of the investors' activities was dedicated to the risk transfer regarding their sale to other players: employees, savings, pensioners, emerging countries.

In this context, financialization translates into the uncoupling between risk bearers (shareholders) and the bearers of investment decisions. Thus, it is created a new image of capitalism in which financial markets become, in fact, privileged places of action and expression of the ownership relation.

The new players of capitalism (international banks, institutional investors which act to delegate administration) have the ability to participate and influence the firms' strategy.

Transformations that have aimed at the functioning of financial markets and financial form of organizing the capital are characteristic to the shift from the industrial capitalism to cognitive capitalism, represented by another system of accumulation, in which the central role belongs to knowledge and creativity. In its essence, the cognitive capitalism is a financialized capitalism.

Deregulation, uncertainty and risk

Another phenomenon that has marked the international expansion of the finance period was represented by the centralization and globalization movement in the savings management. It is about the development of the collective management of savings and the emergence of a new type of financial players, designated as institutional investors. These institutional representatives administrate a "collectivised" saving, which determines Michel Aglietta to talk about a "social ownership" of capital. Financial assets held by individuals are more frequently managed by pension funds, mutual funds or investment companies, as well as by insurance companies.

Financial deregulation and the favourable development of tax over saving have favoured the development of pension funds. Through the volume of managed assets and investment policy, these financial operators are actively participating to the development of capital markets.

At the same time, in the 90's, the active role of the pension funds is noted in implementing corporate governance. As a result of their considerable power, institutional investors manage to impose their targets to large enterprises. Their weight becomes significant in the global economy.

All of these financial investors were managing more than 50,000 billion dollars in 2003, which represents 160% of the GNP of the OECD countries. Five of the richest

countries are massing more than 80% of the assets managed by these investors.

The influence of institutional investors' activity is exercised both on the markets and the management of the firms through corporate governance. As a result, several trends become significant within the developed countries: the growths of the share of institutional investors' activity at the expense of direct ownership; investing a considerable part in shares; the presence of the institutional investors within the shareholding of the large companies becomes a major economic fact (Batsch, 2002, p. 16).

To achieve the desired objectives (minimizing risks, portfolio liquidity and profitability of the investments), the institutional players were aiming at the permanent diversification of placements.

The collective management of savings provided by professionals has contributed to ensuring a more effective management of risk, hence increasing the proportion of shares, which represented the riskiest securities within the financial wealth of households. An important part of financial assets is owned in the form of shares, which has represented a significant change in behaviour.

An important effect of collective management of savings was the concentration of capital firms in the hands of few large investors whose power becomes significant worldwide. Thus, institutional investors, through their importance, exercise great influence on the

dynamics of financial markets. The behaviour and the practices used have contributed to emphasize the international financial instability.

Unlike the heterogeneity of investment options that characterize individuals, a professional institution is interested in maximizing its market part in managing the global saving or a segment of it (life insurance, investment funds in shares, etc.).

It has been noted a great similarity of the behaviour of fund managers, as a result of carrying out their activity according to standard rules, the market reference, asset allocation methods, etc. In a world where there is a fierce battle to seize a market segment, imitating the behaviour of others is justified. It is a skilled imitation often labelled as "rational" and considered the main disease of finance (Artus, Virard, 2008, p. 99).

This attitude of investors largely explains the processes of progress and frequent instability in financial markets and they are evident in the financial bubble of the 90's: as indexes increase, the acquisition of shares increase, which have had shares unrelated to the real value of the enterprises that issued them. It is produced the so-called "financial inflation", meaning a tendency to rise the price of asset by rapidly raising the main stock indices. This pressure is due to the imbalance created between a strong demand of bonds from investors and the insufficient bond offer.

The devastations of the mimesis are obvious in the case of the Asian crisis from

1997-1998, on which occasion it is proved the pro-cyclical nature of foreign capital flows to emerging countries. In the event of a favourable situation, higher productivity is expected and there are recorded excessive capital inflows, which stimulate credit and economic growth. When expectations become unfavourable, investors simultaneously withdraw their capital and investments, which leads to streamlining credit and the prospect of recession.

Studies on the effects of the crisis from the ninth decade revealed the implications of the rational mimesis on economic and social destabilization.

The investors' obsession to an excessive profitableness of their own funds contributed to a great extent, to the weakening of the capital. In this regard, it is mentioned the "15% myth" the profitableness of their own funds or the return non-equity dictatorship. These objectives of profitableness seem more surprising the more it is considered that the world economy came for a long period in an era of low productivity on the financial assets that can be classified as "normal" (Artus, Virard, 2007, p. 100).

With a low inflation, the monetary policy has recorded expansionist tendencies. Therefore, after the 2003 "the world monetary system" increases by 15-20% annually, while global GDP increases by three times less.

At the origin of the financial system instability was also the development of new

markets and financial practices, as well as sophisticated financial instruments. The risks manifested in the financial markets have increased significantly since the mid 70's, as a result of abandoning the fixed rates system in 1973, of generalizing, in the early 80's, the monetary policies by adjusting interest rates, as well as the wider process of deregulation and liberalization of economies, which has particularly affected the financial sector. In response to this increased risk, there have been introduced new instruments to hedge unfavourable market developments. These new instruments, called derivatives, are negotiated within the derivatives markets. These markets appear during the 90's, as a result of the uncertainties that overwhelm the development of some liberalized variables at that time: exchange rates and interest rates. The companies want to cover, first, against unexpected changes resulting from market liberalization.

Thus, derivative products are becoming absolutely necessary but very expensive instruments of the liberalized finances. With their help, financial markets have created new means of financing and insurance against risks of changing the value of an asset (stocks, bonds, interest rate, and exchange rate). Derivative products represent contracts whose value depends on (or "derives" from) the value of an asset. In essence, derivatives are estimates on the value development of these assets.

The general principle which was the basis for booming the derivatives products

was the disintegration of risk. Using derivatives, which are risk transfer instruments, only known risks can be assessed. However, the risks that generate financial crises are impossible to predict and therefore ensuring against losses becomes practically impossible. Moreover, derivatives markets favour the emergence of new risks. As main causes of deepening the vulnerability of derivatives markets, the following are mentioned: strong involvement of banks as supporters of the market; considerable risks of contamination on the structure of these markets; weaknesses in the regulation and supervision area. (Aglietta, 2001, p. 62).

Resorting to some complex financial instruments was due to the investors' desire to obtain high yields, which were superior to the yields specific to the financial assets considered "traditional". Their use in increased proportion was mainly due to the low level of interest rates, a level that was far from being consistent with the appetite of investors hungry for yield. Some investors were willing to take different and practically uncontrollable risks in an effort to obtain high yields in the short term.

Conclusions

In the light of the recorded results, capitalism can be considered the most efficient economic system that humanity knew. However, economic stability remains a goal. In the past 30 years, market economies have had over 100 crises of

various types. For these reasons, uncertainty and instability have become a fact of national economies.

Financial globalization has provided the opportunity for quick gains, but it also generated significant losses as a result of these crises, caused by the international volatile and pro-cyclical capital flows. The alternation of exuberance and pessimism causes determines strong and sustainable financial and economic environment fluctuations. The instability in the financial sphere draws the performance irregularity and the possibility of major risks. The uncertainty has become the main feature of this period. For an increasing number of economists the intensification of regulation becomes an essential component of market economies functioning to prevent crises and limit their scope for expansion.

The climate of deregulation that characterized the Bush-Greenspan era, led to the expansion of a new banking model, where securitization was within its centre. Banks have developed a variety of new techniques to transfer credit risk to other investors.

The philosophy of deregulation has exacerbated the virtues of self-regulation, which proved to be a misconception. Realities have shown the need to replace the old paradigm that supports the balance and efficiency of financial markets.

Financial markets have proven to be fundamentally unstable, while the financial speculation was in the centre of the new economy. The systemic risk became part

of the dynamics of financial markets. Pronounced relaxation of the regulatory environment, the invention of new financial instruments and techniques, launching increasingly sophisticated financial

products, developing a collective asset management industry and revolutionizing risk management have become features of the new capitalism, that is increasingly in the trap of the finances.

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The Play Element and Marketing Policies

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*“Genuine culture cannot exist without
a certain playing component.”*

Johan Huizinga

Abstract. *“Play”, “plaything” are words with which our mind fly away to the extraordinary period of our life – the childhood, when all things are perfect. In this paper we analyze the implication of “play” idea in the labyrinth of marketing strategy, and marketing policy. We will demonstrate that “Play” has a profound influence upon customers, upon their attitudes, their motivations, their perceptions and preferences, and it constitutes “a possible face of marketing”.*

Keywords: strategy; tactic; marketing policy; influence; play.

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At first impression, the “game” is something commonplace, simple and always easy to reach by the children. However though, the game is much more complex than it seems to be, people need the game to relax, but also to continue their work. Johan Huizinga considers that “*homo ludens*, the man who plays, indicates a function as critical as that of a creator and he deserves a place near the term *homo faber*” (Huizinga, 2003, p. 33).

This acceptance urges us, on the one hand, to appreciate the game more than a definition immaterial and, on the other hand, to give up to say that it exists and that performs a necessary or useful function, without leaving room for any philosophical or scientific explanation. In fact, the game is a true auxiliary universe, compensatory, a new order/reality which continues the daily one, in an attending games participating both players and spectators, play events starting from the individual interiority, being improved with imagination and becoming more and more complex, fact that will have a great influence on the whole economic and social life.

The most successful companies are those that manage to offer their customers the expected satisfaction, not understanding marketing as a separate function, but rather as a philosophy of ownership throughout the organization (Kotler, 1997, p. 24). This is the type of firms targeted on the game client-market and not on the product or costs, nowadays feature being the customer orientation, to his devotion and, ultimately, to a marketing based on client. “The most

important element in “*the great game of marketing*” are the buyers, the customers who have interests, the target – groups or rather the target – persons. Regardless of what we called, everything depends on customers” (Arms, 2008, p. 24). In such an optical design, when the game is a goal, rarely achieved by some players, more and more characterized by an increased competitiveness, designed to satisfy strong motivations and ambitions in various geographical areas, and marketing, as an expression of “thinking in the market spirit”, also the company involves its entrance on a continuous rising market, proceeding to the implementation of specific measures.

The appearance of play element in the product policy

Acorporal components of a product include, in addition to many others, the name (brand) of it. Brand can be a name, a term, a sign, a symbol, a drawing or a combination thereof, which is used to identify the goods or services of a provider, consumers considering it an important element that distinguishes the products of a company from the competitors. With this in mind, organizations use the full potential of play element to transmit messages, and meanings that a brand must transmit.

For example, the name (brand) product is chosen taking into account the easy of reading, pronouncing and memorizing it, the universe which it evokes. Thus was done in the *Biscoco* biscuits case: bis (from biscuits) + coco (from the monkey),

choosing a name easy to remember, or in the case of *Leone* biscuits, where the name is associated with the biscuits form – a lion’s head. For *Rex* detergent, Henkel Company chooses the image of a fox, easy to remember and with a high symbolic power, the message key sent to consumers being: “*Rex – a clever way to wash*”, being assimilated with a cunning fox.

From this point of view, the image of the product has a motivational subjective nature, result of how it perceived a product or brand by the consumer. In turn, the game is a manifestation of subjectivism, representing a universe created by man’s own taste, by his own feelings and needs.

Combining the two elements – product and game – we can build a successful brand with a great personality. This image, result of applying a creative program of identification, has to require the product to the customers. Each image must be carrier of a unique message, which suggests the main product quality and its market position. For example, a well-contoured image, based on one or more symbols, aimed recognition by consumers of the company or brand. As symbols that can be used are logos, colours, sounds. Logos should help to instant recognition of the product, choosing humans, animals or objects. Thus, some credit cards from BRD Bank, for example, have printed the image of athletes recognized all over the world in various sports games (Ilie Năstase, Nadia Comaneci and Gică Hagi)⁽¹⁾ or Cocolino balsam has a drawn picture of a teddy bear, stylized, designed to attract attention. Brand

history is closely related to the animated character chosen to represent: Cocolino, a fluffy teddy bear, just good to be embraced, transmitted the benefits of the product (softness and perfume conferred to the laundry by that balsam), as well as the emotions, evoking in the consumers’ soul, emotional states offered by love, safety, care about yourself and about others, willingness to embrace someone you love and to be embraced by someone dear.

There should remember and change optics about packaging, which transformed from an ancillary product into an individual one, which is a whole of interrelated elements, an organized set of knowledge and concepts, and ordered manner of action aimed at the overall achievement of optimal specific economic objectives. Thus, using the expression of the game in various forms, the package meets many of the marketing activity. For example, packs like a box of Milka and Heidi products, express game of the children and adults, and stylized images of animals on the Tedi, Prigat or Fanta juices packs, Barni biscuits, Biscoco biscuits etc. attract attention, have the characteristics of the product creates confidence and a favourable impression.

Regarding the material component of assets, we noted the presence of the play element to a series of products in their actual physical configuration. For example, some products have a toy form: supports of toothbrush, soap dishes, glasses, cups, flower vases, biscuits of different shapes, vacuum cleaners etc. Others are printed with different play pictures: the characters from

stories and cartoons – such as lamps which have printed on them images of princess, Spider Man or Mickey Mouse.

New products are that “original products, improved, modified and new brands that the company realized them through the efforts of its own research compartment” (Jugănaru, 2000, p. 114). This activity involves the strategy of new products⁽²⁾ which have mainly attribute to concentrate effort on the creative team, producing the functional or departmental efforts. In this idea, the play element emerges in that it has a special contribution to training and developing skills for teamwork, to synchronize their actions with others, to achieve a common purpose, the game offering, while the individual is developing, an amount impressions that contribute to increase knowledge about the world and life, increases the capacity of understanding of complex situations, creating restraint capacities by stimulating memory, concentration abilities of obedience to certain rules, the abilities to make decisions quickly, to resolve the situation-problem, in a word develops creativity. This, bearing both the imagination and the systematic search methods and techniques for new ideas, underpins new product design, as the instrument of delegation, allowing team members to work independently and efficiently, but, in the same time, bringing them together in the team.

All these aspects allow us appreciate that the play element used in various forms of manifestation and a corresponding self-expression, help to create the product image

and its position on the market, just as contribute to the formation and development of human personality.

Price and game

In the company’s relationship with the market, beside the product, price has a place of prime importance, as the mechanism for balancing offer with demand of economic assets. Therefore, it appears the idea of *the price game*, that if the demand is greater than the offer, then prices will increase to a level at which the amount of available money for those who want to buy is equal to the total price of the products founded on the market. On the contrary, if the offer is greater than the demand, prices fall until enough buyers will enter on the market to ensure consumption of the available supply.

In this approach, we noted that, finally, those who decide the product price are the consumers, so companies should consider how consumers perceive prices and influence that carries on the perceptions about those buying behaviour. For example, Pic Hypermarket, by the advertising which represents a child who shows a symbolic gesture that *The lowest price is the Pic price*, suggests that they practice the lowest prices, because when the children play, they always are saying the truth. Under the concept of “*economic rationalism*”, buyers will always choose the supplier who is offering the lowest price, though, in reality, the many goods and services market will contain a variety of differentiated prices for apparently similar offers.

Into another advertising, Romtelecom presents the payment method of an invoice as a *child playing*, attracting attention about the facilities offered to pay for services with the image of a young woman who is playing with some balloons. At first sight nothing is unusual, but if we analyze the composite model of buying behaviour, proposed by Machel J. Baker, which attempt to combine economic factors with behavioural ones, we'll realize that the phenomenon of selective perception will contradict the concept of "*economic rationalism*".

The expression of the game in the product distribution

If a sport game strategy involves, as we saw, the players participation to the competition under a system of principles relating to the actual activities of the game, the approach of the key moments of the game and objectively relationship of the players, the distribution strategy involves the answer at least four questions: When? Where?, Whom? How?.

When? refers to the distribution moment, which must be correlated with the nature of the product and its specific consumption (currently, strictly seasonal or casual). Some socio-cultural and sports events (Olympics, tours, championships) exhibitions, the holidays of all kinds (religious: Christmas, Easter or secular – Mother's Day, Children's Day) may be used for products distribution, within a special role plays the game element, it taking,

perhaps, its most complex form. From the decorations to commercialized products as gifts, from those who distribute/commercialize products to customers, from the distribution places to the consumer ones, the play element is founded in: multicoloured greetings cards which combine the image with the text, all kinds of gifts as prevailing those somehow inspired by the games, advertisings whose messages are based on representations of the various games, distributors/retailers and also consumers dressed in story characters, events organized with parents and children through and for fun, distribution spaces arranged/decorated with game's specific elements etc.

Where? Often, companies develop strategies at national and international, regional or local levels. In the local distribution an important place is occupied by marketing deals in specially equipped places, but also in the others, such as parks or playgrounds. For example, products may be marketed in entertainment parks (to the seaside and to the mountain), children towns, game places permanently arranged, kiosks arranged in all sorts of funny shapes (dwarfs houses, wind mills, mushrooms), there where the play element is "at home" and where its influence is felt only on a careful analysis. Here the game overpowers on children and adults, on products and services, on the sale and purchase. Children are playing among electric trains, buffered cars, roundabout, flying plates, elastic mattresses, buying "on the unseen" these services, parents and grandparents paying

for them. In the relaxed atmosphere that establishes the game holiday, the adults become children for a moment and participate for their own pleasure and care for their children in these activities.

Whom? Often one says that the game is typical for the children, but do not forget that they will become teenagers, young men, and then mature persons. Therefore, adults also enjoy playing, sometimes for simply amusement, sometimes under the circumstance that they were children sometime. From this perspective, the play element put its footprint on the segment of buyers formed in particular by children and young people. Thus, if we refer to the campaign named “*Play*”, the launch of Dacia Sandero, we see, after assessing Roxana Panaitescu, group creative director at BBDO Graffiti, that “Dacia truly has something to offer to a young target, currently without a family and without any special obligations, except the job, who had more often escaped from the daily routine, preferably in the bunch, and default on fun”. In other words, marketing, as business philosophy, means the ability to create and maintain a profitable customer, the game in general being a special premise for attracting a very important market segment – children and adolescents, because they have a “purchasing power” sufficiently large to cause the development of specific products, types of offers and advertising.

How? In organizing a game, most often are involved new rules, new players, even new stages, all these because the game involves creativity and imagination,

becoming mysterious, alluring, strong attracting, passion coming from the inside. In this idea, almost any activity and action may be a game and almost any object (the fingers of hands, a thread of a yarn broken muffler, a matchbox etc.) can be transformed in a toy, being used for this purpose and attracting interest. Thus, to facilitate presentation of the product and to strengthen the emotional or rational side underlying the decision to buy, some companies use to promote products transforming the sale place into a clowns show (Carrefour complex) or using promoters equipped with different costumes inspired by stories and film characters. For example, on Christmas holidays are used costumes of Santa Claus for the sellers and cashiers. Using play element it is emphasized this subjective side of the demand, influencing it to be a greater one. Parents gather around the selling stand, triggered by their children, and, if they already come here, they buy some products, not necessarily for the use or children enjoyment, but because they are useful.

Promotional activity is purely game

Even the world is in a crises, in the current economic and social conditions, in the growth of economic international exchanges, and continued diversification of goods and services for the society needs, the consumer is virtually impossible to find himself what kind of goods are on the market, where and when he can buy them

and, especially, if they answered his needs. In these circumstances, it is necessary to ensure permanently communication between providers and consumers. Thus, a product is related to that person who will consume it, but the product is unknown to the consumer and for satisfying curiosity is not enough to submit only the image, but it must be surrounded with elements of the user's daily entourage. One of these elements is the game, omnipresent and reach of all. For example, in advertising spots for Hochland cheese are presented two kids playing "crazy about" this product. Daughter persuades her mother to buy the same cheese, and the little boy surrenders to ride his bike for a sandwich with Hochland cheese.

If we analyze promotional activities, we note a lots of play elements in different forms, encompassing both the people game, the animals and things one. To comment on structural issues of advertising, products promotion, public relations and influence of the game on the promotional message, we appeal to psycho-structural theory, which examines the relationship between "me – other – the world", taking as a starting point precisely the game. Olivier Reboul (Reboul, 1984, p. 98) wonders why the advertising addressee let himself influenced by a message so simple, brief, naive, and almost incredible. The answer is simple: the message corresponds to certain mind requirements; every adult wants to identify himself with the fact he feels child along with his parents, advertising doing

only to transfer this simple need to the object which it proposes by the publicity material. Under the circumstances of a consumption society, each tends to procure most goods and advertising broadcaster wants to increase profits, the possession being such an experience of ecstasy play.

Such publicity often pass from a purely informative level to an emotional one, the reality deforming without the receiver gives notice. That happens in the advertising spot called "Dacia Sandero has fancy playing", the car being alive and participating in a gamely-spy or in a game of playing ball with some young people. This mechanism allows the receiver to identify himself with the characters of the publicity material and, therefore, to consider himself the owner of the product. It creates such a desire to buy and from the desire to act is only a step.

Therefore, as life is a game created by our own taste, by our own feeling and needs and "the game is fighting, hazard, or mock dizzying whirl (...) a whole universe of opportunities and risks" (Chevalier, Gheerbrant, 1994) also marketing, in general, and marketing policies, in particular, are unique by the dimensional universality of the economic potential which is selective adapted to the rules of the game for a free and competitive economy. From this perspective, the play element is established as one of the possible faces of marketing, the game being as the tangible guarantee for maintaining the freedom reflex, a true freedom, not just wanted, promised, suggested, or dreamed.

Notes

- ⁽¹⁾ The Nike Company has reached the first place on the sportswear market (before that being on the third place after Reebok and Adidas) by associating its products with the world basket star, Michael Jordan. Other products and companies that dominated the market by associating with sports personalities are: Coca-Cola (Cristi Chivu), Golden Brau (Bogdan Stelea), Pepsi (Adrian Mutu and David Beckam), Vodafone (Gheorghe Hagi) etc.
- ⁽²⁾ In the dynamics of creating a new product Ph. Kotler distinguishes two stages: product strategy and marketing strategy. These two, in their turn, contain a series of principal stages such as: ideas generation and selection, concept creation and testing, economic analysis, product creation, marketing testing, product marketing (Kotler et al., *Marketing Principles*).

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Analysis over Critical Issues of Implementation or Non-implementation of the ABC Method in Romania

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***Abstract.** This article analyses the critical issues regarding implementation or non-implementation of the Activity-Based Costing (ABC) method in Romania. There are highlighted the specialists views in the field opinions and own point of view of the authors regarding informational, technical, behavioral, financial, managerial, property and competitive issues regarding implementation or non-implementation of the ABC method in Romania.*

Keywords: Activity-Based Costing; inductors cost; performance; competitiveness; management.

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1. Pro or against Activity-Based Costing (ABC) method

Many of the articles connected to Activity-Based Costing (ABC) method incurred in various professional and academic mediums from Romania are pleading pro or against implementation of this method. There will always be controversial opinions, but our aim is to highlight the main positive aspects and even the negative ones connected to implementation of the Activity-Based Costing method. Although, there are few enterprises and companies that actually apply the Activity-Based Costing method in Romania, and we think that an advertising of this method and a presentation of its advantages will lead to a promotion and implementation on a larger scale among small and medium enterprises of our country. As result of some studies conducted in the organizations and promotional institutes regarding the modern cost calculation methods, we found out that a part of these, although they are very involved in the implementation of the ABC method, the most of those interested in implementation agree that they should wait or use an alternative implementation method with lower costs.

2. Which are the problems underlying the application or implementation of the Activity-Based Costing method (ABC) in Romania?

Based on studies made by researchers from European Union and United States of America and also based on data collected

from different companies of Romania regarding implementation of the Activity-Based Costing (ABC) method, we have been identified few common application problems, as follows:

a. Informational problem. This problem is based on three critical main factors that lead to failure to implement ABC method, as:

- Huge work volume in collecting information that requires the ABC method;
- Accuracy degree of provided information of the ABC method;
- Confusion in elaboration of other bookkeeping in addition to financial accounts.

Linked to the first factor, many of the accountants are of the opinion that the ABC method supposes a very large work volume in collecting data, processing and elaboration of situations need different final users. But what is the reality? First, we must think to a data volume sufficiently significant to provide more accurate information. What will be the detail level of data that should be provided by the accountants as result of processing data? We have two situations: either we choose a very simplified calculation model, and the risk of obtaining deforming information is maximum, or we choose a very complex model, and the chance we obtain accurate information is very high, but the processing costs are also very high. So, we choose none of these solutions. We will choose an intermediary solution based on a rationally model that will highlight the relations between cost relevancy, information

significance, data accuracy and necessarily flexibility due to recording consumptions at activity and process level during several administrative periods. We need to have in mind what we lacked in traditionally methods, as visibility, relevance and information accuracy from the managerial accounting. In other words, to avoid a larger processing information volume and other supplementary costs we must realize a cost calculation system of which architecture should be orientated according to final decisions.

The second factor is connected directly to the first factor and depends on the degree of orientation to the final decisions. It must be retain in this context the famous remark made by the professor Robert Kaplan: “*It is better to be approximate correct than to be precisely incorrect*”. We have two situations: one connected of provisional calculation, another connected to absorption costing. In the case of provisional calculation, the work volume necessary for its achievement is very high, but it must be very correct. In other words, the information must be accurate to be used in the second stage of the absorption costing, where the cost drivers used in the first stage must not change for not having distortion of costs. We need very precise information in any moment!

Many specialists have been wondered, since the ABC implementation method, do we need the Large Register Book? Of course we need, because the ABC method “*is a translator inserted to extract general information and other data; it is used as an*

optic correcting magnifier that evidences clarity”⁽¹⁾. As is known, the ABC method is a direct result of the full costing method (absorbing) which takes into account all direct costs, and the overhead (activities) are allocated based on specific allocation keys. As result, the ABC method uses surrogate for related cost in the case of activities costs. The ABC system is considered as an interface between existent data and tools that follows to be processed with its help. The experienced accountants consider that ABC system, once implemented and adequate maintained in function, facilitates enormously the collecting work and processing the obtained information. All depend on the degree of knowledge and accumulated experience in exploitation of the Activity-Based Costing system.

b. Property problem. This is a problem that goes beyond accounting. Not accepting and not applying the ABC method because of property lack leads to confusion among the employees and employers. In the most of the institutions and enterprises where initially it was presented the ABC method, it was a pretty big success from the interested specialists, but shortly after adoption and effective implementation of the method, it has came up periodical maintaining problems of the ABC system. Responsibility delegation regarding the ABC’s management it reverts more to the workers or direct productive personnel. The difficult problem remains the collecting responsibility and updating information and here it interferes the documentation degree

of the departments and direct involved persons. Each department or involved person must know “*the activity and cost drivers catalogue afferent of it*” to help to rule the specific methodology of the ABC method, avoiding any confusions and clearly establishing the responsibilities of the persons and departments involved in maintaining the ABC system.

c. Technical problem. This problem finds its solution in one of the factors that

could lead to implementation failure of the ABC method, namely the lack of software. The criteria underlying the choice and determination of cost drivers are very important. Two major categories that stand on base of description of different categories of cost drivers are optional (by choice) and defining (determination). The description form and disadvantages of the two categories of criteria are presented below.

Criteria categories	Description	Advantages
Choosing criteria	<ol style="list-style-type: none"> 1. Easiness of identification, usage and understanding. 2. Existence of a direct rapport between overhead costs and cost drivers. 3. Positive or negative influence on personnel. 	<ol style="list-style-type: none"> 1. Decreasing of evidence costs. 2. Obtaining a real product costs. 3. Explaining the cost driver concept to employees.
Determination criteria	<ol style="list-style-type: none"> 1. The complexity degree of assortment range – always is chosen a rational number of cost drivers. 2. The exactest degree of calculation – it is considering the rational number of cost drivers. 3. Usefulness degree of information. 	<ol style="list-style-type: none"> 1. There are considered the two situations⁽²⁾ generated in practice. 2. It is kept a limit about choosing the cost drivers number. 3. Justification the real costs achieved.

The most of the specialists think that without adequate software we can't succeed to implement the ABC method, which from the point of view of work volume is particularly complex. It is known very well that 95% represents the effort made to achieve of the architectural ABC system and behavioral changes management and only 5% represents the effort made to implementation of the ABC system with software help. Initially, they thought that is absolutely necessary the presence of new software. If we think well the most of the software is created in a common language. Why spend more money on another software if we could adapt the old databases

to which we are interested?! The database administrator which is a good programmer can succeed to correlate more data levels creating this way a new program meant to adapt perfectly to the ABC method architecture. In other words we have two options: either call for a specialized firm that can create the needed software, either we use an updated existent database, making a data conversion according to the new requests specifically to the ABC method.

d. Behavioral problem. This problem brings out the fact that ABC system doesn't represent only a simple range of data and its analysis. It interacts through employees with of reality calculation technique,

financial or behavioral. The ABC technique changes the political landscape of organization.

e. Performance problem. This problem is suspected by the majority of employees when it focuses on a new system as ABC. According to it, the unitary costs and benefit margins vary significantly compared with volume based costs. If ABC method is not aligned to the compensation system and performance evaluation, it tends to become in the employees perception just a threat to their jobs.

f. Financial problem. This problem is a delicate one. Many of specialist's studies from the area have been indicated as main cause of ABC's system failure implementation the low financial performance of an enterprise. Impossibility of some managers to understand the real nature of costs and its amplitude could lead to ABC's failure implementation before to be tested, developed and implemented as enterprise specifically medium requests. In this case, the cost can be: tangible and intangible. From the tangible costs category are included: design costs, formation, application, maintaining, and from the intangible costs category are included: employee's morale and political decline. How can we obtain a maximum benefit? Among solutions we can remind: practicing prices on products lower than competition, elimination of non-benefit products from range of products, concentration on specific product promotion, practicing product mix that contribute to obtaining of efficiency and increased effectiveness etc.

g. The problem of competitiveness. This problem focuses on two directions: competitive degree on internal level and competitive degree on external level. Regardless of using a traditional system or advanced as ABC it won't provide us information about the satisfaction degree of a customer or about control degree of a process from the enterprise. The ABC system can't distinguish very clearly between a new customer and a loyal and satisfied customer of its given services quality. The ABC system, in its ensemble, doesn't offer the necessary time for a feedback on elements as efficiency and effectiveness of unfolding activities. The visualization of connections between processes that is unfolding in the enterprise and connective activities contribute to improvement of respective activities performances. Using operational systems along with ABC system it can contribute to successful implementation and functionally maintaining of the last one.

h. Managerial problem. This problem is the main reason for failure implementation of the ABC system into an enterprise regardless its size. For a successful implementation of the ABC system we need a powerful team which has to be involved in the project. This project has to be lead by a project director. The ABC project team has to dispose of adequate resources, labor, knowledge and organizational culture being available to learn and improve continuously to contribute on this way to successful implementation of the ABC system into the

enterprise and obtaining superior performances. It can appeal to experts or consultants specialized into ABC implementation, so that the implementation guaranty is successfully assured.

The problems presented in this article do not cover totally the area of influence factors in the implementation or non-implementation domain of ABC

method in Romania. In the future we will submit for attention other aspects meant to clarify the problems previously presented, and so, we launch the desire to contribute for research and deepen the aria of knowledge of problems that are confronting the enterprises from our country and not only, successfully implementation of the Activity-Based Costing (ABC) method.

Notes

- ⁽¹⁾ See Gary, Cokins "Activity-Based Cost Management – Making it work. A manager's guide to implementing and sustaining an effective ABC system", 1996, p. 202.
- ⁽²⁾ The situation of cost drivers' insufficiency (1-3 cost drivers) can lead to effectuation of inaccuracy allocation of overhead costs on carriers and, so an inexact production cost. With other words, as much costs share

of an activity is higher in the total costs, as bigger are the perturbations resulted from usage of a little number of cost drivers in the effectuated calculations. The situation of cost driver's excess (over 10) can lead to a production cost as closer to the reality, but the work volume made is very high.

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