PROJECT-DRIVEN SOFTWARE BUSINESS IN TRANSILVANIA – A CASE STUDY

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Abstract: *The fairly low salaries of the IT workers compared to the Western countries, the skills and the location have supported outsourcing become one of the most competitive Romanian sectors. IT sector in Romania maintains a steady growth favoured by outsourcing companies. Moreover Romania is highly competitive when you take into account the level of technical proficiency and soft skills in the country. Romanian labour force can drive relevant projects even in small teams. This case study explores the realty of Romanian IT companies profiles. It presents in comparison two companies bases on organizational and strategic dimensions: project approach orientation, leadership, project value driven, and social responsibility. The corporate goal of the first company presented in the case study - Fortech - is to achieve the best adaptive organizational structure which can sustain its competitive advantage. This advantage results from combination of three main ingredients: scaled up human resource capital, versatile knowledge management and adaptability to customer needs. Fortech manages and administrates and execute their business activities using project management methodologies and practices in order to achieve the strategic goals. On the other hand Dolphin Kiss Company is a "Python boutique agency" created around a single contract and organized on a single project. The project was contracted with a top company from telecommunication industry. The company is a small team of creative software engineers focused on developing a very innovative software business solution. This case study is an empirical qualitative research intended to depict the main differences between two relevant company profiles present in the actual economic context: small team – results oriented – highly skilled VS large structure of outsourcing teams – matrix organized – customer oriented. The case study constructs a space for debates regarding the potential evolution of the IT labour market on the mid and long run: How IT companies can adapt their strategies to global demand? Is outsourcing viable on the long run? can be just few questions for debates and interactive learning.*

Keywords: outsourcing, project value, strategic orientation, software business, labour force, project management

JEL classification: J2, D4, L1

1. Context and Companies

The case considers two software developing companies from Cluj-Napoca, Romania.

The first company is Fortech SRL and from the description of the company on their website, Fortech SRL *"… is a top Romanian IT outsourcing provider, offering customized software development solutions and IT support services (www.fortech.ro). […] Fortech is an IT outsourcing services provider. With a team of more than 260 software engineers and more than 10 years of experience in the field, Fortech is a reliable partner for collaborations in the area of IT outsourcing. We have proven expertise in a wide range of technologies, complemented by strong processes and methodologies for successfully*

managing software projects." The Fortech slogan is "+IT high quality, near shore price". Fortech has international business partnerships in USA and Europe.

The second company is DolphinKSS SRL from Cluj-Napoca, Romania. Accordingly with company's website presentation, *"Dolphin Kiss is a small company founded in 2007 in Hong Kong. We first started doing web projects, but two years later, new business opportunities led in the relocation of the company to Finland. In 2011, we have decided to expand the company and start a new team in Cluj-Napoca. Currently we are a team of 9 people, 7 located in Cluj-Napoca and 2 abroad. We develop smart software solutions, by Keeping It Simple Stupid, focus on our customers' demands by being smart and reactive and don't enforce stupid processes that slow things down."*

# of companies	Turnover				
# of emplyees	[107K, 448K)	[448K, 961K)	[961K, 2242K)	[2242K, 1210K]	Total
[10, 16)	48	21	8	1	78
[16, 28)	24	39	12	2	77
[28, 57)	5	17	39	16	77
[57,2276]			18	58	76
Total	77	77	77	77	308

Source: Register of Commerce, 2013

For Fortech and Dolphin Kiss companies the strategic intent, organizational design and operational actions are the reflection of their management analysis and decisions.

Fortech organizational goal is to achieve the best adaptive organizational structure in order to gain competitive advantage combining three main ingredients: scaled up human resource capital, versatile knowledge management and adaptability to customer needs. They plan, administrate and execute their business activities using project management methodologies and practices in order to achieve the strategic goals.

Dolphin Kiss is a "Python boutique agency". I prefer to use this label because it encapsulates very well the company's characteristics regarding organizational design and strategic goals. Actually, the term "boutique agency" is largely used in advertising. A boutique agency is a small advertising company focused on creative aspects of developing advertisements, but the term was also imported in other fields (Darr, 2003). Boutique agencies work is highly creative; they are small teams and the members may work contract based or as freelancers to get a specific task for particular projects. They are qualified and paid accordingly. The clients, a small list in general, approach boutique agencies to ask high quality creative work or niche products and services. "Python", in the label, states for the high-level, structured, open-source programming language created by Guido Van Rossum in the early 1990s. Python was used by Dolphin Kiss for a wide variety of programming tasks during the product development. Nevertheless in the company were used many state-of-the-art technologies for the project product development; I opt for this 'Python' label to emphasize the preference of the company for the open source technical solutions in general.

Dolphin Kiss was created around a single contract and has organized its business activities on a single project around this contract. The project was contracted with a top company from telecommunication industry. The project had a well defined triple constraint: Time – the estimated duration of the project was three years and it took in fact three years and four months. The scope of the contract was to build a software web application for data analysis and content management of the telecommunication operations and data. The company owner, who was the project manager in the same time, hired employees and contracted freelancers to build a small team of creative software engineers focused on developing a very innovative software business solutions.

2. Case Companies Classification

Accordingly with CAEN (National Classification of Economic Activities, code 620), NACE (Classification of Economic Activities in the European Community) and ISIC (International Standard Industrial Classification) both companies Fortech (Figure 1) and Dolphin Kiss (Figure 2) are part of the same industry: Information Technology and Communications. According with information from Registry of Commerce, and based on profit accounted in the annual balance sheet of 2011, Fortech is on the 3rd position in Top 5 profit of the big IT&C companies in Cluj County, and on position 40 overall IT&C companies at national level. Dolphin Kiss is on 2nd position in the Top 5 profit of the small companies in software business from Cluj and on position 130 overall IT&C in Romania.
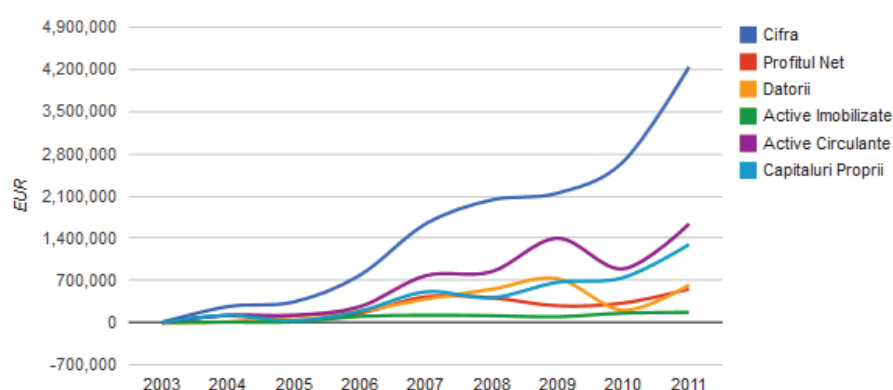

Figure 1: Fortech SRL financial public information
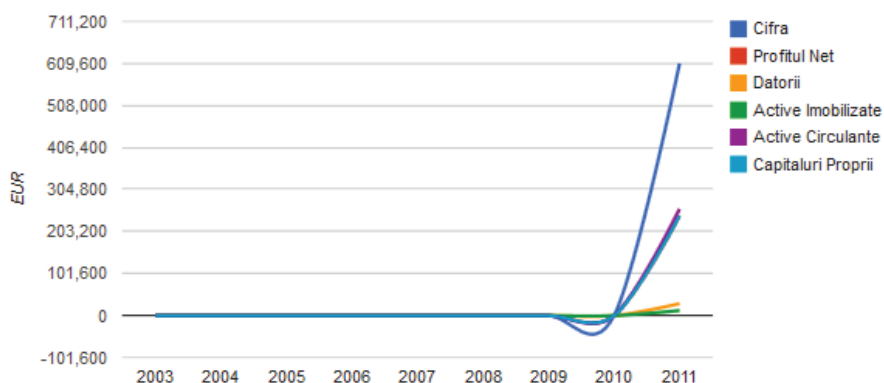Source: Register of Commerce, 2011

Figure 2: Dolphin Kiss SRL financial public information
Source: Register of Commerce, 2011

3. Organizational Design of Project Driven Organizations

To achieve their objectives, companies may organize their resources and effort based on two main broad approaches: projects and operations. Operations are repetitive processes and activities for undefined period of time; projects at their kernel are defined by the triple constraint: time – they are temporary, scope - create a unique result, and cost. An

expanded definition of triple constraint includes moreover the risk and the quality (Mulcahy, 2005). A program is a group of projects with a coordinated management because they use the same resources pool, are interrelated or are part of a bigger project (Mulcahy, 2005). Considering authority, responsibility, resources distribution and information flow in organization there are three distinct categories in the market structure (Figure 3):

- Functional Organization;
- Matrix Organization;
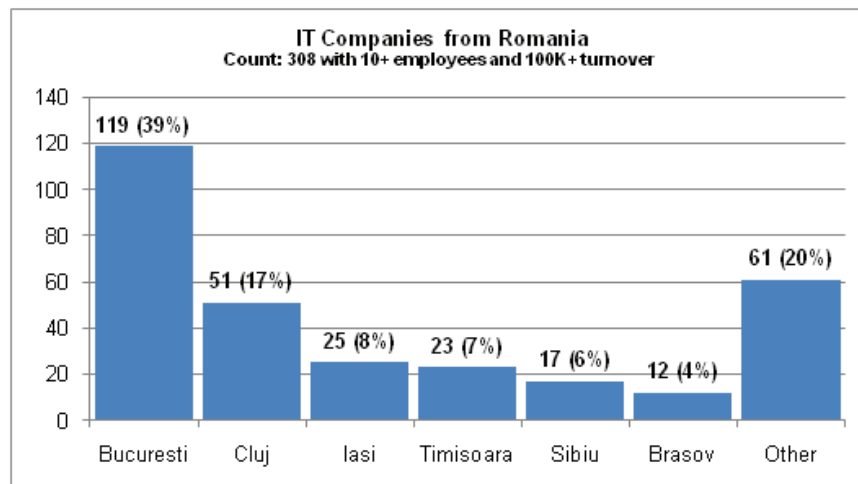- Projectized Organization (Greene and Stellman, 2009);

Figure 3 IT Companies financial public information
Source: Register of Commerce, 2011

In functional organization the departmental managers have all the power over resources; in project organizations the authority is given to project manager by the sponsors of the project; in matrix organization there is a share of authority and responsibility between functional managers and project manager. The matrix organizations purpose is to take advantages from both designs, functional and projectized. The matrix organization on its turn might be polarized on the same dimension such as we talk about week matrix when the authority and decisions are balanced in favor of functional managers, and we talk about strong matrix when the authority is balanced in favor of project managers.

In project-driven organizations teams are organized around projects. They might come from different departments in a matrix organization. In highly projectized companies personnel is contracted independently or hired just for a specific project development.

In project-driven organizations project managers have the whole responsibility and authority over the project in terms of budget and schedule. Project managers choose the team members and release the team at the end of the project. In management literature it is made a distinction between projectized organization which has no hierarchical structure and project-driven organization which includes both matrix and projectized organizations, also called pure product organizations (Kerzner, 2009).

The project manager reports to the project sponsor and she is accountable to the stakeholders. A stakeholder is anyone who is positively or negatively affected by the project.

Fortech is organized by units which are managed by program managers. Fortech has a strong matrix design. Each unit manager has a portfolio of projects. All activities from a unit of the company are organized by projects and all project managers report directly to both unit managers and sponsors. Units (or program) managers have authority and

responsibility over the scope, budget and resources of the projects. Program managers' work concentrates in initiating and managing process groups. Also their role is very important at the end of the projects in closing process group. They have to release the team from project and in the same time to find another project for them to be allocated onto. This is a key responsibility of the program managers. At this point they become a sort of functional managers responsible for the human resource component of the organization. The main management drivers of the organizations are the unit managers. They report to CEO. Between unit managers, CEO, functional managers there exists a high level of cooperation and communication, aiming to optimize the effort of the organization.

Project managers are positioned in the third hierarchical layer. They are more coordinators of the project teams. Project managers assure good communication in the project between the sponsor, team members and program manager. Moreover they are technical leads of the teams. The project managers' work is concentrated in executing, monitoring and controlling processes groups.

On the other hand, the company design has in the top of the organizational matrix a simple and small functional structure with a dozen of people. The chief executive officer, who is also the main shareholder of the company, concentrates his work on business strategy, growth opportunities and corporate partnerships. The company has a human resources department, a marketing department, a financial department and IT department responsible for the information technology infrastructure. The functional department's roles are to support the unit managers for the projects and programs managed in the organization. The functional departments supply services, support and resources (personnel recruitment and training, financial management and accountancy, IT maintenance, etc.) for the whole organization.

Dolphin Kiss is a highly projectized company, a pure product organization. The team is managed by a full profile project manager. He is also the owner of the company. All supportive business activities, as accountancy, logistics, etc. are externalized. The company was built in 2009 having as a prerequisite a certain contract signed between the company owner and the sponsor of the project. The scope of the project was highly innovative and risky, but somehow counterintuitive, the critical points of the business have been the initialization phase of the project and not the execution of the project. The Dolphin Kiss owner, helped by a freelancer software architect, proposed a highly technical software solution to a leader company from telecommunications industry. Initiating processes have been difficult due to contract issues, business need documentation, stakeholder identification made. I estimate that the closing phase of the project will be another critical point for the Dolphin Kiss evolution.

4. Distributed Leadership - Authority and Decision in Flat Organization

Responsibility in the organization is the duty or obligation to complete a specific act or assignment. Authority is the power to exact obedience and make decisions to fulfill specific obligations. From these two results, accountability means: being answerable for success or failure (Forsberg et al., 2005).

Obtaining the optimum mix of vertical and horizontal accountability structure within one company is not an easy task. Frank Ostroff, a consultant at A.T Karney's Transformation Practice, identifies a set of principles to follow for the design and management operations of horizontal organizations. Regarding the horizontal companies organizations he mentions:

"Make teams, not individuals, the cornerstone of organizational design and performance";

"Decrease hierarchy by eliminating non-value-added work and by giving team members the authority to make decisions directly related to their activities within the process flow" (Hodge, 1999);

Also Ostroff emphasizes that the flat organization is unique and he states clear that horizontal organization is not cure-all but can be a reputable solution for certain contexts. He shows that horizontal structure has been applied with success to diverse organizations as Ford and Health Administration (Rouse, 1998). An important bet and hypothesis in the new 'flat' world is: that a network-centric organization will be about superior decision-making by those closest to the action. The networked, matrix and project-driven organizations distribute the accountability and leadership to entire people structure of the organization.

On the other side there are conservative opinions that the latest trend of horizontal organization that promised to reduce the cycle times, to lower the cost and increase the quality, may not be the anticipated panacea. Even though there are two things accepted:

Decentralization is going to be the standard in the new organizations;

Every organization will use a hybrid mix of functions, processes, strategic business units and business teams (Stalk and Black, 1994);

Historically, people are trained to follow directions, and let others make decisions, but nowadays, when data and information can be highly available to all, local decision–making should be taught and encouraged (2003). Management expert Tom Peters in his book 'Liberation Management' describes the emergent organizations of the next century. One of his central questions is: What will replace the traditional ladder of success in "these flat, flexible, and furiously changing organizations? [...] There's not going to be much of a pyramid left to climb. So how will people get their kicks?" (Peters, 1993).

When it comes to payment systems things are quite different from a flat to an horizontal designed organizations. Brown research concluded that the choice between a flat and hierarchical structure is important, and he noticed that workers under a flat rate structure perceived their pay to be fairer; these workers experienced higher levels of satisfaction (Brown, 1999).

5. Value-driven Project Management and Value-driven Organizations

Regarding the corporate goals and value aimed, we assist nowadays to a swift from a unitary focus on returns to shareholders to a multi-dimensional focus on the value for multiple organizational and project stakeholders. Inside the organization, people are more and more considered an asset that should be developed, cultivated and coordinated and not commanded and controlled (Malone, 2004). Theory Y of McGregor is gaining more acceptance and implementation surpassing Theory X which states that people are a cost that should be monitored and controlled (2003).

Projects do not operate in vacuum. Projects are developed into organization with a matrix design or are run outside of a well structured organization but in a certain socio-economic context or specific industry e.g. film industry, software business, pro-bono projects, etc. When run into matrix organizations projects are influenced by the organizational culture, management policies and procedures. In the same time organizations can be seen as a shell medium between individuals and socio-economical context. Organization acts as a protective buffer against socioeconomically uncertainty; in turn the people business effort concentrates on the organizational goals. Opposite in projectized organizations companies may not support, not even short and medium term, job security. Career concept does not exist specifically in projectized organization. The career concept might be a personal perception regarding work and personal development and is not a social perception at organizational level, a ladder that can be accessed. In a projectized organization when the project is over, team members and project manager do not have a department to go back to. They need to find another project which usually means another job or another employer (Mulcahy, 2005).

When we are to talk about value in project management, the first question that pops up is: "The value to whom?". A well articulated answer should take into consideration the perspectives all of the different types of stakeholders of the project.

To understand better the organization value, there should be answered the following questions:

- What are the goals of the organization?
- Whose interest are being served by organization? (Management et al., 1999)

Charles Handy, an Irish author and philosopher, specialized in organizational behavior and management, developed a series of ideas around these two important questions. Among the ideas Charles Handy has advanced are the "portfolio worker" and the "Shamrock Organization". Regarding the question "whose interest are served by organization?" Handy identifies six kinds of "stakeholders" of the organization: Customers, Employees, Investors, Suppliers, Environment, Society as a whole (1995).

By identifying the value of the organization for each of these stakeholders we will determine an overall value of the organization.

When it comes to general project management frameworks a stakeholder is anyone who is affected by the cost, time, or scope of the project (Greene and Stellman, 2009). A stakeholder may impact project positively or negatively. The main stakeholders are:

- The project manager;
- Project team;
- The performing organization;
- The customer;
- The sponsor;
- The project management office (Mulcahy, 2005);

In project-driven organizations the role of stakeholders is very important. The overall value of a project is influenced by stakeholder's actions. Mulcahy specified that to manage the stakeholders the project manager has to:

- identify all the stockholders of the project;
- determine their requirements expectations;
- communicate with stakeholders;
- manage their influence over the project (Mulcahy, 2005);

Moreover to maximize the value created, captured and delivered by project management, a project manager has to:

- understand their perceived value of the project;
- manage the impact on the organization, the impact on company strategy and long term objectives;
- go beyond the immediate expectations; go beyond transactional elements; project managers have to see in perspective to the whole value chain of the organization not only to the triple constraint of the project.

Ideally the definition of value is aligned with the strategic objectives of both the customer and the contractor (Kerzner et al., 2009). This is not always the case. Furthermore, we need to define more detailed the value of the project. Considering points of view of the different kinds of stakeholders of a project we understand that value driven by projects can have many definitions. Different stakeholders with different perceptions for the project value can influence differently the project outcomes in particular and the company strategy in general. Not all the projects are strategic but many times they are part of a value chain and part of the company performance. Therefore projects should not be treated separated when counting value in project driven organizations.

6. Project Value, Future Organization and Psychological Contract

To understand the value of new forms of organization and the value of organizations driven by projects we have to understand the changes during the last decades. In attempt to draw these changes we rise following questions:

- What are people for organization culture: a labor force with a certain cost or human assets?
- Decision is empowered 'a priori' by the design of organization hierarchy or decision distributed and based on knowledge?
- Organizational strategy and objectives are centered on shareholders priorities or depend on value delivered to the all stakeholders?

The knowledge-based organizational perspective understands workers as human assets who create the value of the organization. These organizations invest and put at risk some of their human capital. Making an explicit link between people's personal needs and business goals can be a catalyst for changing work practices. In the end, both the company and the employees benefit. These kind of organization people oriented shouldn't' choose between the goals of the business and people's needs. They have to go beyond and connect work and personal lives of their people through a dual agenda that reframe the conflict into an opportunity for innovation and change (Bailyn et al., 1997).

O'Neill and Adya in their research sought to better understand the different psychological contract perceptions of knowledge workers at various stages of employment. Different psychological contracts exist at various stages of employment. An employee's willingness to share knowledge may be contingent on whether the organization equitably fulfills its reward obligations. Managers must properly assess the nature of psychological contracts maintained by such workers so that knowledge-sharing messages address employees' key motivators. They find that workers are keenly aware of the impact of their knowledge. Moreover an effective management for sharing rather than hoarding is a critical success factor for knowledge-intensive organizations (O'Neill and Adya, 2007).

Fortech organizational structure is highly flexible. The company has a well defined organizational design, but members can move from a project to other, from a unit to other, from a technical position to a management position and vice versa, and all of these depending on their interests, values, and career scope; on the other side there are limitations in this sense imposed by work performance, by the company goals, strategy and nevertheless by the ongoing projects processes.

7. Project Management Tools and Techniques in Matrix Organizations

Project management as practical discipline and scientific domain developed tremendously in the last decades. There are dozens of membership-based organizations and non-member affiliations dedicated to promoting, developing and certifying project managers. There are a number of approaches to managing project activities including lean, iterative, incremental, and phased approaches. Regardless of the methodology employed, the core project traits are: objectives, timeline, and cost, as well as the roles and responsibilities of all participants and stakeholders.

Another main characteristic of the projects is that they are progressively elaborated. The things change to enhance better the project objectives (Greene and Stellman, 2009). To keep track of the project work elaboration there have been developed many tools and techniques. These tools and methods evolved rapidly. Technologies as the internet, web, networking, PM software programs, groupware assist project management a great deal to improve efficiency. Thomas Malone states that the dominant business organization of the future may not be a permanent corporation but rather an elastic network. Dolphin Kiss can be considered a small dynamic working network. From this perspective Dolphin Kiss is a temporary company where people are organized around a project, which is based more on an electronic network and less on social contact. In fact project team is partially dislocated

and the contact with the main stakeholders (sponsor and business owner) is realized via internet tools and means like Skype and WebEx.

Both Fortech and Dolphin Kiss use 'agile' management. Agile management or agile project management is an iterative method of determining requirements for engineering and information technology development projects in a highly flexible and interactive manner, for example agile software development. It requires empowered individuals from the relevant business, with supplier and customer input. Agile techniques are best used in small-scale projects or on elements of a wider program of work, or on projects that are too complex for the customer to understand and specify before testing prototypes (2013).

Both in Fortech and Dolphin Kiss, the project work coordination and control is supported by software technologies as: version control systems (VCS), source code management systems (SCM), issue tracking, bug tracking, and project management software tools. Nevertheless there are main differences in how these two companies uses tools and technologies to conduct their businesses. These differences are given not only but the scale and diversity of the businesses and human resources but also by their strategic goals and inherent organizational design. So, Fotech is more interested than Dolphin Kiss to capture the benefits of people connections and lessons learned; Fortech are interested not only in the good workflow process of certain project, which is a basic request, but they aim to improve the means of organizational learning. For Fortech the people, the knowledge and innovation are the main sources of competitive advantage. They manage people in the long term approach. Dolphin KISS seeks a strictly tactical relation with people. This relation is centered on immediate project results. Fortech invests continuously in people relations, and soft people network infrastructure is supported with powerful technical solutions. By this I mention not only the IT network infrastructure, but a set of specialized software applications developed for organizational relations with their teams and individuals. Technology sustains knowledge management to be a competitive advantage of the organization and supports decision making of the workers.

Fortech is a cooperative environment. The management executives accept that whenever there is a trade-off between immediate profits and investment for breeding the competitiveness, the latter has to prevail. The Company invests continuously in training and personal development and they understand the value of cooperation: leveraging the knowledge of one another creates a greater wealth and sustainability for entire company. Furthermore, this idea is captured in company strategy.

8. Conclusion

If we can consider an extrapolation, social responsibility could be in the top of Maslow's pyramid correspondent of the corporate ecosystem. Social responsibility represents how well an organization serves the interests of society as well as itself. Regarding the value driven by projects in organizations, the social responsibility is the broadest and the less measurable goal that can be aimed.

Howard R. Bowen states in his book 'Social Responsibilities of the Businessman' that public responsibility, social obligations, and business morality are synonyms for social responsibility (Jr, 1989). He describes the term social responsibilities of businessmen: "It refers to the obligation of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of objectives and values of our society."

Fortech in contrast with Dolphin Kiss is highly active regarding social responsibility, especially philanthropic giving. Philanthropic giving actions are organized with regulation by the company through human resource department activities. For example all major holydays implies preparation of giving acts. These acts imply both organization founds and people gifts for the benefit of social categories with special needs or under-privileged.

These two companies do not see Social responsibility as an investment. Actually, social responsibility can be hardly seen as an investment in Eastern Europe countries due to the lack of information, effort and legal framework for such social practices. Even Milton (Jr, 1989), a promoter of social responsibility concept, stipulates that a company may participate in social responsibility activities if the marginal gains exceed the marginal costs. A popular major argument against a Romanian company becoming involved in social responsibility activities is if the government wants businesses to support social activities, it should give them adequate incentives to do so.

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