Prof. Dr. Ballet Jérôme, Center of Ethics and Economics for Environment and Development in Madagascar, University of Antananarivo, Madagascar
Prof. Dr. Raghu Bir Bista, Professor, Tribhuvan University, Nepal
Academician Professor Slavko Karavidić PhD, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
Prof. Dr. Sreten Miladinoski, MIT University, Skopje, Former Yugoslav Republic Macedonia
Prof. Isiaka Esama, Pebble Hills University and Coordinator of International Community Education Association, Nigeria Chapter, Nigeria
Prof. Dr. Nizameddin Faghih, Editor-In-Chief „Journal of Global Entrepreneurship Research“ (JGER), Faculty of Entrepreneurship, University of Tehran, Iran
Prof. Dr. Radovan Pejanović, University of Novi Sad, Serbia
Prof. Dr. Cane Capragoski, MIT University, Skopje, The Former Yugoslav Republic Macedonia
Ass.prof. Dr. Agrawal Reena, Jaipuria Institute of Management, Luckow, Uttar Pradesh, India
MSc. Aidin Salamzadeh, teacher of Entrepreneurship, Rules and Regulations, marketing and Sale Management, Labor and Social Security Institute of Iran (LSS), Iran
Lecturer MSc. Dušan Marković, Belgrade Business School, Belgrade, Serbia
Miloš Vučeković, IT expert, Singidunum University, Belgrade, Serbia
Prof. Dr. Marijan Stevanovski, MIT University, Skopje, Former Yugoslav Republic Macedonia
Ass.prof. Dr. Almir Peštek, School of Economics and Business in Sarajevo and deputy director of Economic Institute Sarajevo, Bosnia and Herzegovina
Prof. Dr. Boufelda Ghiat, Faculty of Social Sciences, Oran University, Algeria
Prof. Dr. José G. Vargas-Hernández, University Center for Economic and Managerial Sciences, University of Guadalajara, Mexico
Ass.prof. Zélia Breda, University of Aveiro, Portugal
Ass.prof. Neven Vidaković, The University College Effectus – College for Law and Finance, Croatia
Dr. Tatjana Papić-Brankov, Institute of Agricultural Economics, Belgrade, Serbia
Prof. Dr. Milan Krstić, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia
Ass.prof. Dragan Milošević, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia
Prof. Dr. Slavoljub Šljivić, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia
Academician Ass. Prof. Dr. Vesna Baltezarević, Faculty of Culture and Media, Belgrade, Serbia

PUBLISHING BOARD

Prof. Dr. Goran Kvrčić, Director of Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
Academician Prof. Dr. Mirjana Radović-Marković, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
Dr. Dušan Cogoljević, president of Faculty of Business Economy and Entrepreneurship, Belgrade, Serbia
Academician Prof. Dr. Radmila Grozdanić, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
Academician Prof. Dr. Slavko Karavidić, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
Prof. Dr. Sofronija Miladinoski, Faculty of Tourism and Hospitality, Ohrid, Former Yugoslav Republic Macedonia

Copyright© 2014 by Faculty of Business Economics and Entrepreneurship, Belgrade. All rights reserved
Notes from the Editor-in-Chief

Editor-in-Chief

Scientific journal International Review has been published since 2012 as a modernly designed and technically arranged according to the Act of editing of the Ministry of education, science and technological development of the Republic of Serbia. Besides the fact that it attracts attention in technical and esthetic sense, it has gained great readers' attention in the scientific circles worldwide because of the quality papers and various topics that it covers. This is confirmed by the great number of papers that arrive to the editorial office from the USA, India, Pakistan, Turkey, Iran and other countries of the region and beyond.

I would like to express my gratitude to all the published authors, but at the same time to invite new authors to suggest topics that they would like to write about and read about. The invitation for new reviewers, other associates and guest editors is constantly open. According to this policy of the journal we are looking forward to your applications and welcome your useful suggestions.

We kindly ask you to quote papers from our journal properly, as well as to send us the papers that have not been published. The responsibility for plagiarism is solely of the author. This is why we are introducing one new procedure this year – all authors, whose papers are being considered to be published, will fill in one form concerning the originality of the paper.

I thank you in advance and invite you to become a part of our great team of associates, if you have not done that by now.

April, 2014.

Belgrade

Yours,

Editor-in-Chief

Acad.Prof. Dr. Mirjana Radović-Marković
Contents

Challenges in managing cross-cultural virtual project teams .......... 7
Marković Dušan, Krumov Krum, Nikitović Zorana

The importance of Management for Growing and Developing
Agribusiness SMEs: Designing a Conceptual Framework .......... 25
Abol-Ghasem Arabiun

Value Chain analysis for opportunity exploitation in software
industry .................................................................................................................. 45
Jahangir Yadollahi Farsi, Behroz Zarei, Lashgari Mahdi

From Product Customization To Customer Relationship
Management ........................................................................................................ 59
Krstić Milan, Skorup Ana, Vukanović Saveta

Gender in the Facets of Corporate Social Responsibility .......... 73
Vilkė Rita, Giedrė Raišienė Agota

Social change and women entrepreneurship in Algeria .......... 90
Boufeldja Ghiat

RURAL WOMEN AND FOOD SECURITY IN MYMENSINGH
DISTRICT ............................................................................................................. 101
Shajahan Kabir Mohammad, Beslać Milan, Grozdanić Radmila

Kosovo’s economy and Serbian economy ........................................ 114
Knežević Vladimir, Kvrđić Goran, Ivković Dragan

Work Motivation: Comparative Analysis between Serbia and
Bulgaria ............................................................................................................. 127
Radović-Marković Mirjana, Vukotić Vladimir, Krumova Albena

The Participants on The Serbian Insurance Market .................... 136
Piljan Ivan, Cogoljević Dušan, Vujadin Nataša

Application of VaR (Value at Risk) method on Belgrade Stock
Exchange (BSE) optimal portfolio ................................................................. 142
Miletić Siniša, Korenak Boris, Lutovac Miloš
Challenges in managing cross-cultural virtual project teams

Marković Dušan¹, Krumov Krum², Nikitović Zorana³

Abstract

The biggest challenge workers in a virtual workplace will face is creating a boundary between work and home since the two spaces are now combined. Namely, completely understanding and being able to follow correct procedures and processes associated with a company can be challenging if workers are not physically subjected to the culture of the company on a daily basis. Overcoming these challenges is not only the job of the employee, but for managers as well. Managers in a virtual organisation need to be able to identify these challenges, and create programs in which their virtual workforce will feel like they are valued and part of a greater cause, said authors. The authors also pointed out that the training the culture and standards set by management in a virtual workforce will be reflected within their employees’ motivation and productivity. The paper concludes that global project management can succeed through culturally-aware management, cross cultural communication and more network within and among companies.

KEYWORDS: managing, challenge, managers, virtual project teams, globalization

JEL: M15

¹Belgrade Business School, Belgrade, Serbia, e-mail: dusanbps@gmail.com
²Sofia University „St. Kliment Ohridski”, Bulgarian Academy of Sciences and Arts, Bulgaria
³Faculty for Business Economy and Entrepreneurship, Belgrade, Serbia, e-mail: zorana.nikitovic@vspep.edu.rs
Introduction

The world is going to be too tough and competitors too ingenious as companies are shaken loose from traditional ways of conducting business (Radovic-Markovic, 2008). Today's changes are performed globally and cover all aspects - social, economic, political, technological, cultural, etc. The tendency towards globalization, which will continue intensively in the future, generally requires a change in the organisational structure of modern organisations. They need to move towards flexible, open organistic forms, based on modern technology and modern knowledge. Therefore one of the key factors for success and effectiveness of the organisation is related to its ability to evolve with changes that occur in the environment. And as it is known changes in the modern world are intense and dynamic. “To meet constantly changing conditions and demands, business has to transcend boundaries to get what it needs regardless of where it exists—geographically, organisationally and functionally” (Radovic-Markovic, 2008, p.3).

Our research methodology is almost literature based. The aim of our research was to explore difference in the approaches to the significant challenges for anyone working in a multicultural team. Namely, drawing on insights from various theories on global virtual intercultural teams, our scientific overview seeks to provide broad bases for further research. In addition, this article explores the management styles and skills that are most effective in a cross cultural setting.

Theoretical overview

In the late 20 century the finding was made that the processes of globalization will be inevitably linked to the tendency of rapid growth in the number of cross-cultural teams. And not only this, 21 century will be the century of virtual teams and network organisations, and they will become a superb tool for achieving organisational goals while the classical organisational structure will be significantly changed and the team will be the main working unit within the organisation (Katzenbach, Smith, 1993; Hale, Whitlam, 1997; Lipnack, Stamps, 1997; Hambrick et al., 1998). Indeed, in recent years the global business environment made it necessary to create a cross-cultural virtual teams, formed by representatives of different countries with different cultural backgrounds (Gibson, Cohen, 2003; Hinds, Kiesler, 2002).

Global virtual intercultural teams are generally characterized by the following: 1/ they are constituted by representatives of more than two nations, 2/ team members have different cultural background; 3/ they work together but physically distant from each other (usually in remote geographical locations), 4/ they work across temporal distance; 5/ team members are formally independent of each other; 6/ performance of their common activity is based on technology-mediated communication (Baba et al., 2004).

There are different types of virtual teams. When referring to the varieties of virtual intercultural teams we should keep in mind that there is a difference between the classifications of ordinary cross-cultural teams and virtual teams. For example, one of the first classifications of the teams is made by Lawler and Cohen (1992). Depending on the functions, they identified the following teams: work teams, parallel teams, and project teams. Work teams are usually formed when the company needs to produce a product or service in a specific way and for a given
period of time. Parallel teams are the ones who work together with the "basic" team, and have supporting functions. The third type is the project team, which is committed to the planned execution of a task that has a specified start and end.

According to Fisher (1994) there are four types of teams: natural work teams, cross-functional teams, small project teams, special purpose teams. To the first type are related teams that arise during the natural working process in the implementation of a task within an organisation. Cross-functional teams have a constant aim and their activity crosses organisational boundaries. For example, a cross-functional team for resolving organisational conflicts can be composed of representatives of various departments and its constant aim can be related to the resolution of conflicts within the organisation as a whole. Small project teams are small temporary collection of people formed, in order to solve a particular problem (scientific, technological, industrial) for a specific period of time, after which their existence is terminated. The same applies to special purpose teams, but the difference is that they are dealing with large-scale tasks.

Virtual teams have a variety of configurations and variations as project or product-development teams, networked teams, parallel teams, work or production teams, service teams, management teams, and action teams (Duarte, Snyder, 2001).

One particular form of virtual groups are virtual project teams, which can be defined as time-limited, non-repetitive groups charged with producing a one-time output (Cohen, Bailey, 1997).

A virtual project team includes members who work remotely on a specific project, have common goals, scattered jobs, perform measurable tasks, have a charter to make decisions (McMahon, 2001).

It should be borne in mind that in the activities of the teams that implement virtual cross-cultural projects there are the same problems that accompany the implementation of intercultural projects not in virtual, but in ordinary business environment. And in turn, one of the main problems that accompany contemporary process of globalization of the business environment is related to the management of intercultural projects (Kealey et al., 2006).

When comparing Virtual Project Teams and Traditional Project Teams both advantages and difficulties facing the Virtual Project Teams are noticed. One of the biggest difficulties is related to the limited means of the virtual team members to communicate.

As mentioned above, individuals in traditional teams usually have the opportunity to interact "face to face" if not daily and consistently, at least from time to time. Virtual team interactions by definition are mediated electronically or through appropriate technology. This extremely complicates communication process and creates big problems.

As mentioned above, we must consider that there is a significant difference between the ordinary team and multicultural team. But on the other hand we consider the fact that there are no two identical multicultural teams, as each specific multicultural team is characterized by features that are unique to the intercultural context in which the team operates.

"Managing in virtual organisations has immense benefits by being able to defeat the notion of having to be in the same place at the same time for the purpose of getting work done as a team. It also has the benefit of being able to micro-manage different sectors of their organisations when having to oversee important changes toward the projects that they are completing “(Radovic-Markovic et al. 2014, p.25). According to Radovic-Markovic (2014), managing people in virtual firms require:
— Require different style and type of management
— Work is more team oriented, making it more difficult to assess individual contributions.
— Managers must find new ways to evaluate and supervise those employees without seeing them every day in the office.
— Training should be offered so all workers can understand the new work environment.

In the management of virtual intercultural projects, there are two key points that determine the successful operation of this virtual structure: the first point concerns the building of team project manager, which will manage the team, and the second one concerns the building of the virtual team for project management. These two aspects of the implementation of virtuality intercultural projects are equally important. However, before we proceed with the building of a virtual project manager or a virtual project team, we must first answer the series of questions such as: what will be the size of the team, what will be its "demographic group", etc. But it is not enough the group of individuals who will implement the project to be only formally constituted. This conglomeration of individuals must be a group of interdependent members, as it, in turn, has to become a team. Formal designation of the group is just the first step in building a team that is able to effectively implement a specific project. After this first step, the team is not automatically created any more, but from now on it should be built up gradually step by step. For example, according to the model of Xerox, described by Fisher & Fisher (2001), after this first step the construction, development and preparation of the team includes a number of others such as clarification and development of the common philosophical vision and mission, defining goals, developing the main group norms and rules of behaviour, distribution of roles, clarification of the system communication, etc. But while all of these steps are valid for traditional teams in virtual teams things are much more complicated, since they operate in a global cross-cultural context.

The development of a satisfactory concept of how the virtual work teams can create a real business advantage. The advantages are very much and they eliminate the shortcomings of traditional organisational forms. For example, when creating a new working group of classical type, first we need to create a workplace organisation, which is related to spending resources on the new location, and sometimes with certain risks of moving the family members of employees. In virtual teams or groups a similar way of organisation in the workplace does not exist as it comes to a way of organizing work around goals, skills, tasks, not locations.

A number of advantages of virtual teams can be listed:
— They are flexible and adapt quickly to changes in the external environment.
— They are open systems that lack classical mechanistic structure, which means that they are open to innovation and quickly implement changes.
— They gain experience in different geographical areas.
— They are composed of representatives of different cultures, which ensures different perspectives when discussing problems.
— They are relevant to the globalized business environment, as their communication networks 'leap across’ international boundaries.
— They can provide the experience and know-how in disadvantaged and marginalized geographic areas.
— The organisations themselves within which virtual teams operate, acquire extensive experience from geographically distant sources.
— Virtual teams save shipping costs and the costs of office premises.
— Virtual teams save the time of its members.

These are just some of the benefits, but the general conclusion is that in today's globalized business environment, the organisations that start using effective virtual teams will succeed in the future (Duarte, Snyder 2001).

Moreover, these advantages even exist, can turn a team into a successful one only if there is a successful cross-cultural management.

Virtual Team Definition and Concept

A common belief is that globalization and technological progress have led to a change in the organisational structure and to the creation of new organisational forms. These new organisational forms and new types of organisations exist alongside the old traditional organisations, but their existence is expanding and they tend to become dominant in the future as they are highly efficient and productive. Generally speaking, a modern form such as the global virtual team is a not great in size group of individuals who are geographically dispersed and assembled via technology to accomplish an organisational task (Jarvenpaa, Leidner, 1999).

Actually, the idea of creating virtual teams is due to the advances in information and communication technologies. Back in the 1980s the concepts of "telework" and "telecommuting" have been introduced, by which a new form of cooperation between members of the group and the organisation is validated. Under this new form the group members develop activities outside the central office, but communicate with the "center", and also with each other through various technical means - telephone, fax, and subsequently by e-mail (Pliskin, 1997). The team is called virtual because collaboration does not take place through real interaction, but in a virtual environment and possibly its members have never interacted with each other live "face to face", but only indirectly, through technical means - this is the other aspect of the term "virtuality". Nowadays this form of organisational interaction turns out to be extremely productive and efficient as the dominant tendency is to create a knowledge economy, to provide knowledge and services, not only to produce goods.

Furthermore, in contemporary processes of globalization, it is necessary in a team to be involved not only members of their own organisation, but individuals working in other organisations located in different geographical areas. It is understandable that such geographical dispersion allows an organisation to acquire a variety of resources and to extend its expansion in different directions. Because communication between the members of such groups is carried out not directly but is mediated through a variety of means, because of their dispersion and because of the possibility for this organisational unit to achieve wide expansion, it is named not only "virtual" - for its designation as synonyms are used a variety of terms such as dispersed organisations, distributed organisations, network organisations and telework (Jackson, van der Wielen, 1998).

All this means that in the era of globalization, the economic borders between countries no longer exist and to global business new opportunities and new challenges are being discovered (House et al., 2004).

Some authors too boldly predict that 21 century will be not only the century of virtual teams, but also the century of network organisations that will incorporate virtual teams as components as each of them will be networked with the others. The essential point here is
that in the operation of virtual teams and their interaction with organisations will be established two-way communication structures (Lipnack, Stamps, 1997). Thus, the team will turn into a superb tool for organizing people in order to achieve a goal (Katzenbach, Smith, 1993). Some authors even believe that in the future the classical organisational structure will be significantly changed and the team will be the main working unit within the organisation (Hale, Whitlam, 1997).

On this basis we can summarize that the global processes taking place in the world are not only social, political and economic changes, but also changes in the business environment in which the organisational unit as such must be addressed with a new philosophical vision and the new challenges facing it must be taken into account.

**Virtual Team and Cross-Cultural Project Management**

The most important factor for the effective operation of a virtual team is a virtual manager. The success of the intercultural virtual project depends on his organisational abilities and skills. Management of the virtual team that implements a project is very difficult and complicated when work is carried out across cultural and national boundaries. In this case, the project leader faces difficulties of psychological and cultural nature, as there are cultural differences both in social perceptions of the team members and their patterns of behaviour.

In the management of virtual projects the responsibility of the project manager is increasing as he/she becomes a central leader of the project, which not only manages the internal processes but realizes the inter-team communication and coordination of tasks (Lee-Kelley, 2002). In this context, one special area in management is separated, which refers to the cross-cultural organisational management, whose main task is to reveal the ways, methods and tools for dealing with cross-cultural differences seen as sources of conflicts and misunderstandings in the implementation of joint activity (Jassawalla et al., 2004).

The success of cross-cultural management depends on knowledge of the dimensions of virtual teams. In this regard, different authors define as important different dimensions of the team. For example, according to Fisher & Fisher (2001) the main dimensions of the virtual team are *time, place and culture*. These are very important dimensions, as they report the ability to synchronize time for collaborative work, pay attention to the geographical dispersion among members, but also to the cultural context, on the basis of which interaction between members of the virtual team will be implemented.

There is a large number of challenges to the activities of virtual project teams that need to be known by the managers. As research in this area is too scarce, and the experience of managers is also too little, project managers generally use a form of trial-and-error adaptation to design their project-organisations (Tatum, 1983; Bergiel et al., 2008).

Studies show that global virtual teams face four types of challenges: communication, culture, technology, and project management (Kayworth, Leidner, 2000).

However, we think all virtual project teams, especially when they are of cross-cultural type, face more difficulties in their functioning. In general it can be said that there are seven types of barriers to success faced by virtual project intercultural teams and these are:

- Technological barriers
- Barriers of organisational nature (internal environment)
— Barriers of economic nature (external environment)
— Barriers of personal-psychological nature
— Barriers of socio-psychological nature
— Barriers of cultural nature
— Manager as a barrier (toxic manager)

Here we concentrate on passing the technological barriers, as we pay higher attention to the challenges of communicative nature and to the challenges of personal and socio-psychological nature in management of virtual project cross-cultural teams.

Technological barriers include poor quality hardware, incompatible software (collaborative software), slow network computers, disturbance along the line and disconnection, loss of information, etc. The technological barriers, though making the activity difficult, are easily superable.

Furthermore, technology, although sometimes making difficulties, in principle cannot be responsible for the failure or de-structuring of a virtual team. Kimble et al. (2000) tend to believe that the failure of a virtual team is related to the lack of trust, positive relationships across the three boundaries of geographical distance, time zones, and cultural differences.

One of the "minor issues" that often hinders communication between members of the virtual team in the project implementation may be connected with difficulties for a member of a work team to log-in.

Another minor problem refers to the fact that the system may collapse during a working session without knowing the reasons for that.

One of the significant problems of global virtual teams, however, is coordinating the temporal patterns of team behaviour (McGrath, 1991). Difficulties in the time synchronization of collaboration or joint discussion of an issue in virtual project teams may become a major barrier and to block collaboration. This problem arises with great power in global virtual teams where there is a variety of time zones. To avoid inconvenience to all members of the virtual team in the very beginning a time frame for interaction and for collaborative online debates must be specified (Lee-Kelley, Sankey, 2008). For example, this time frame should provide rotation of time for online debates according to time zones which will avoid inconvenience caused to the same team members.

**Communication challenges in managing cross-cultural virtual project teams.**

Virtual teams are built on the basis of distance communication, without which their existence is impossible. And one of the most serious problems in multicultural virtual teams is the one related to communication among members (Horwitz et al., 2006). The difficulties are caused by the fact that representatives of different cultures communicate with each other and intercultural diversity is precisely what leads to the problem.

One of the most popular frameworks for the analysis of cross-cultural issues in human resource management is proposed by Geert Hofstede (1980). The model is based on five bipolar dimensions, by which cultural differences can be analyzed: high/low power distance, individualism/collectivism, masculinity/femininity, high/low uncertainty avoidance and long-term/short-term orientation. Later alternative models of cross-cultural analysis were developed and tested by other scientists (House et al., 2004; Schwartz, 1994).
For example, Baba (1996) classifies differences in cultures into three categories:
1. Differences in traditional organisation structure;
2. Managerial differences;
3. Differences in concept fundamental vision for the organisation and in philosophy, on which are based the agreements and laws.

It is quite natural for the members of intercultural virtual teams not only to have any knowledge of cultural background of their partners, but they may have never visited their country and have no clue about them (Hinds, Kiesler, 2002). With this lack of specific knowledge about the culture and the relevant country, in communication the mechanisms of categorization are usually triggered. It means information about the perceived social object is inserted into the existing cognitive category in the recipient's mind, and in this way the "image" of the perceived object "absorbs" the characteristics of the category. As a result, a certain amount of information about the perceived social object is lost and communication becomes inadequate and ineffective. Sometimes individuals who have a lower education level and lower culture rely exclusively on the process of categorization, which in turn leads to stereotyping or to perception on the basis of stereotypes. In this situation, if the members of a cross-cultural virtual team realized that they perceive each other on the basis of stereotypes as a result, the distance between them will increase, mutual trust will go down and it is very likely to occur strongly increasing anxiety, combined with difficulties in interaction (Stephan, Stephan, 1985). These difficulties can lead to the creation of warring coalitions separated on the basis of stereotype perception. It was found that stereotypes and power imbalance, typical to the dividing of working groups into majority and minority, lead to lower satisfaction with communication within the group and possible withdrawal from the interaction (Goto, 1997).

The basic idea here is that members of different cultures perceive the world differently and put a different meaning in the patterns of behaviour implemented by them. This methodological approach is correct, although it does not take into account the role of subcultures and some additional factors. It is known that depending on the religion, social status or age, the representatives of the same nation can have opposite sets of values and implement various patterns of behaviour (Coon, Kemmelmeier, 2001).

Despite these nuances, the basic assumption is reduced to the fact that representatives of different cultures see things differently, which means that communication between them will be difficult. In communication there are semantic barriers too. This means that words mean different things to different people. Some words are even untranslatable between cultures.

Moreover, there are barriers caused by word connotations. Words mean different things in different languages. For example, negotiations between the Americans and Japanese are very difficult because the Japanese word "yes" is translated as "yes", but the connotation might be "yes, I listen/hear" instead of "yes, I agree". It is also necessary to mention that there are barriers caused by differences in tone, style of expression. In some cultures, the language is formal, but in others it is informal. In some cultures changes in tone are dependent on the context: people talk differently at home, in social situations and at work. The use of personal, informal style in situations where a more formal style is expected can be burdensome and repulsing. It is important to be noted that there are barriers caused by differences in perceptions. People who speak different languages actually see the world differently. Eskimos see snow differently; at least they have different words for it (Robbins, 1998).
The common thesis is that there are differences between the representatives of individualistic and collectivistic cultures. These differences in communication are reduced to the fact that, for example, people from collectivistic cultures seek consensus and reach a compromise more easily than people from individualistic cultures (Hardin et al., 2007).

According to Hofstede’s thesis (1980), some of his listed dimensions dominate in individualistic cultures, others dominate in collectivistic cultures. Although such an argument is very popular, it must be borne in mind that not always the studies, on which such generalizations are made, are representative enough. For example, although American culture is highly individualistic, the U.S.A. is certainly not the "most" masculine nation, with low power distance and low uncertainty avoidance. Similarly, the Chinese culture is not the "most" collectivistic, feminine, and with high power distance, as it is usually presented in the studies (House et al., 2004).

One of the biggest challenges for virtual teams is not associated only with differences in cultures, but with different backgrounds of team members. It is due to the fact that in virtual teams the traditional form of communication between members is missing. As mentioned earlier, in the absence of "face to face" communication the non-verbal form of communication is eliminated, there is no body language, there is a lack of the emotionally saturated nuances of intonation, of the tone of voice, through which the greater part of information is transmitted between communicating sides (Lee-Kelley, 2002). It was mentioned that according to Birdwhistell up to 65% of a message's meaning is communicated through non-verbal clues (Birdwhistell, 1970). Today, some researchers argue that the sum of information communicated non-verbally is even higher. For example, Fromkin and Rodman argue that 90% of the meaning of a message is non-verbal (Fromkin, Rodman, 1983). This information deficit that results in virtual teams often becomes a barrier to effective management.

Another barrier is related to the absence of informal communication networks in the functioning of virtual project teams. As it is known, in traditional teams and organisations informal communication networks exist, besides formal ones. Informal network, sometimes called "grapevine" is free to move in all directions and serves not to managers but to organisational members. It is known that the grapevine has three main characteristics: first, it is not controlled by managers; second, information that flows on the grapevine is perceived by subordinates as more credible and reliable; and third, it serves the interests of those involved in the informal network (Rubbins, 1998). The lack of informal communication networks in the virtual project teams is a problem since with the appearance of information distortions they cannot be eliminated, which would result in de-structuring of communication.

One of the problems of communication in virtual teams is associated with the style of writing. For example, Americans make short messages and do not pay attention to the style because they are result-oriented and want to achieve success quickly, while Japanese are loyal to their working style, they do not rush and strive to shape their messages accurately. For the Japanese a message is incomplete if social and non-verbal context is not present in it (Lipnack, Stamps 1997).

Obviously, the experience and skills of the members of cross-cultural virtual team to communicate with each other is related to its effectiveness. Matveev and Nelson (2004) compared American and Russian managers working in multicultural teams and they found that cross-cultural communication competence affected the performance of multicultural teams.
Challenges in the management of cross-cultural virtual project teams are not directly attributable only to the different cultural background or to the mediated communication between team members. There are also factors of personal and socio-psychological nature, which are a real challenge to the virtual cross-cultural management.

For the successful management of virtual cross-cultural teams personal factors are of great importance. The role of personal characteristics of team members as a determinant through which management refracts is accentuated also in analyses of the activities of cross-cultural teams performed in a traditional business environment, and not in a virtual one. In order to be effective the manager needs to know what motivates team members in their interaction, he/she needs to know their motivation for achievement, their emotional attitudes towards other team members, their responsibility in collaborative activity, etc. (Johns, 1995). He/she must also know that there are cultural differences in motivation to work in representatives of different cultures, which is proven by empirical research (Fisher, Yuan, 1998). One of the factors of moral character whose influence is very strong on a personal level, and which affects the effective operation of multicultural virtual teams is trust. Just because team members communicate with each other indirectly and do not know each other as individuals, one of the largest problems of cross-cultural virtual teams consists in the fact that trust is difficult to be established between them (Jarvenpaa, Leidner, 1999). Given the importance of this issue many cross-cultural studies of trust have been conducted (Kiffin-Petersen, Cordery, 2003). The results of studies convincingly show that for a virtual team to be effective, high mutual trust should have been built among its members (Lawley, 2006; Webster, Wong, 2008).

Trust is indeed a very important factor for the successful implementation of the virtual project. In the natural environment within the traditional organisation it is easier to build trust among individuals and apart from their personal characteristics, it also depends on certain characteristics of the organisation, such as the intensity of communication, the organisational size, cohesion, etc. In the virtual team, although the size is small, it is difficult to establish mutual trust, because individuals interact with each other as performers of roles assigned to them in advance, but not as bearers of personal characteristics. In this case there is no interpersonal perception, “face to face” communication, emotional colors of interactions, etc. To compensate visual deficits in virtual communication, Xerox, for example, promote placing of photos of team members in collaborative and communication technologies in order to “see” the other member (Fisher, Fisher, 2001).

It is obvious that in the lack of interpersonal perception, which occurs in virtual communication, trust is hard to achieve. This is due to the fact that very often messages, actions and behaviour of the representatives of other cultures are not understood and interactions with them are based on stereotypes (Cascio, 2000).

Building trust between members of the virtual project team depends on many factors and one of them is related to the fact that in the very beginning members of the virtual team agree on how to organize joint activities (Greenberg et al., 2007).

Before the start of the project they should also have clarity on earnings and dividends, which they shall receive after its completion. Justice in this regard is the guarantee of high trust, although in the perception of fairness there are also serious intercultural differences. One of the areas in which a large number of studies have been conducted is focused on
cultural differences in the perception of fairness regarding rewards and remuneration for the performance of certain work (Murphy-Berman, Berman, 2002).

Studies show that in virtual teams technologically mediated communication increases the chance of misunderstandings (Gibson, Cohen, 2003). It is so because in this case, surely occurs the effect of the well-known barriers, which impede effective communication, namely: *selective perception, defensiveness, language* (Robbins, 1998). As it is known, in *selective perception* participants in the communication process selectively perceive what meets their needs, motivation, experience, background and other personal characteristics. *Defensiveness* occurs when people feel insecure, anxious and threatened, and in that emotional state they lose their ability to understand the messages adequately. This means that they become defensive and react in a way that impedes effective communication. *The language* may also be a barrier to the adequacy of communication, as understanding the meaning of words is dependent upon three factors - the age, the educational and cultural background (Robbins, 1998).

All these - lack of trust, perceived unfairness in remuneration, misunderstandings of behavioural character, etc., turn into a reason for the appearance of high anxiety, which results in higher professional stress in members of virtual teams. In this situation a vicious circle appears: deficits in communication caused by the action of various factors lead to anxiety, and anxiety in turn reduces the quality of the communication process. This is because it is assumed that anxiety and uncertainty are central elements affecting the efficiency of the inter-group communication. Anxiety which is associated with attenuation of communicative perceptivity is inherent to 5% up to 20% of the population (Robbins, 1998). It has been proven that the high level of uncertainty and anxiety reduces the person's ability to properly interpret the messages that he/she receives from the others. On the other hand, if the level of anxiety is extremely low, then cross-cultural communication also becomes ineffective because the person becomes too confident and uncritical about their own behaviour (Gudykunst, 1998, 2005).

Management Skills and Challenges In Cross-Cultural Project Team Management

Both in traditional organisations and in virtual team management the manager is a central figure and his/her skills depend on the success of the project. However, there is a significant difference in the management of virtual cross-cultural teams in comparison with the management of traditional organisations. In virtual teams only the formal organisational structure is dominant, and the team management is conducted only by instrumental leader - there is no formal structure (or informal structure of relations is quite weak), there is no informal (emotional) leader. In this situation, the attention of team members is focused primarily on performance (Workman, 2007). This means that in the very beginning the manager needs to have precise rules for performance measurement and clear criteria for reporting the results.

Decision making in managing of cross-cultural virtual project is also accompanied by difficulties. These difficulties are even greater than the difficulties encountered in making managerial decisions in traditional organisations. As was pointed out, traditional organisation is not a rational unit that sets rational goals, pursues them and achieves them. It is rather a political arena in which a battle between separate coalitions which have opposing interests takes place. And to understand the nature and characteristics of an
organisation, we need to know what are the preferences, needs and interests of those individuals who influence the process of decision making (Pfeffer, 1975, 1981).

Significant for the successful management decision making is the fact whether it is a homogeneous or heterogeneous composition. Compared with homogeneous groups, heterogeneous groups tend to be more reluctant to take risky decisions (Watson, Kumar, 1992). And when the manager sets up a virtual team, he/she should seek the team to be heterogeneous, if possible, as heterogeneous teams are more creative than homogeneous ones (Hunsaker, Hunsaker, 2008).

Managers should be aware also that in managing and in mentoring members they should approach differentially depending on the cultural background of individuals. For example, some members of collectivistic cultures prefer to be interacted more often and to be mentored while Americans prefer to act independently and do not need or do not expect a lot of direction and monitoring (Atkins et al., 2000).

Another feature of virtual cross-cultural team management refers to leadership styles. Every manager has a preferred style of management, which he/she uses with relish and which brings him/her success in the management of traditional teams and organisations. Managerial styles are essential for group performance, but that does not apply equally to virtual teams. In teamwork the leadership styles are not of much importance. It is the organisational goals that matter (Katzenbach, Smith, 1993). This applies also for intercultural teams. Moreover, there are cognitive styles that are independent of culture variables such as the adaptive-innovative cognitive style (Tullet, 1997).

Therefore, one of the critical challenges of the virtual manager is the objectives assigned to the team. Managers of virtual intercultural teams often make a mistake believing that team effectiveness is associated with achieving consensus of values among individuals. It should be clear that values themselves cannot predict human behaviour (Fink et al., 2006), and in the management of teams managers should not aspire to that kind of consensus. What unites the members of the virtual team are not common social or cultural values, but common goals and common interests which determine behaviour.

A project is a unique venture with a beginning and an end, undertaken by people in order to achieve common goals. Each project itself is unique, but in general, the projects share common attributes such as goals, people formally dependent on one another, equipment and supplies, schedules, budgets, conflicts, which arise in the course of the activity and interdependencies between other business projects and strategies (Baker, Baker 1992).

As mentioned in the previous lines, in the traditional organisation goals can be unclear, disguised or false, but the team should have clear and specific goals. From the very beginning, when the team is constituted, the manager should include members in discussing and clarifying common goals (Forester, Thoms, Pinto, 2007). In addition, the manager should not forget that although the activity of cross-cultural teams is subject to a common group goal, there are differences in individual goals. Individual differences exist not only in goals but also in values and expectations (Darling, Fogliasso, 1999; Evans, 2006).

Both goals and role expectations are very important for the effectiveness of virtual teams. Therefore, upon constituting the team, the roles that each individual has to perform must be clearly defined. In virtual teams individuals intervene with each other as performers of specific roles and informal interactions are limited, so all team members have precise role expectations to each other (Chinowsky, Rojas, 2003).
The discrepancy in role expectations and also ambiguity and failure to achieve goals, often lead to conflicts within the team, which could lead to its de-structuring. Of course, cultural differences are the main sources of conflict in the implementation of cross-cultural projects, because to different cultures different patterns of behaviour are inherent which are mostly unknown to the members of the heterogeneous organisation and team. As most cross-cultural projects are temporary, team members do not have enough time to learn the specifics of the patterns of behaviour demonstrated by representatives of opposing culture and on this basis conflicts arise (Zwikael et al., 2005).

Conflicts arise also when, due to cultural differences within the team, different types of cross-cultural groups are differentiated. They usually perceive each other on the basis of a stereotype, and it usually leads to resentment among team members, and hence a conflict (Adler, 2002).

Managers should be aware that by definition in intercultural interaction the potential for conflicts is very high. This is because in virtual communication there are no natural mechanisms that underlie social identity and perception on the basis of stereotypes is inevitable (Imahori, Cupach, 2005; Tajfel, 1982).

Along with this, managers should be aware that social factors have also caused conflicts. Social differences between organisational members can be of various kinds and, in one way or another, they can provoke conflicts between them (Zhou et al., 2005).

Very often in the analysis of conflicts that arise in managing a cross-cultural virtual project causes are sought only in the technical equipment or in software defects disregarding reasons of personal and socio-psychological nature. In negotiations for conflict resolution little attention is paid to the socio-psychological processes that occur in groups. And very often not the technological aspect of the process, but the different goals and conflicting desires of individuals who interact in a team or organisation will inevitably lead to a conflict that must be resolved through negotiations (Easterbrook, 1994; Robinson, 1990).

One of the problems that often arise in the management of virtual intercultural teams is associated with deadlines. As it was highlighted above, one of the characteristics of the virtual project refers to the fact that it has a beginning and an exactly fixed in time end. In different cultures understanding of "deadline" is different. For the American culture deadline is the limit beyond which any activity is impossible, but for the representatives of other cultures deadline is something that can be permanently moved in the future (Rubbins, 1998).

Besides deadlines the results of effective management of virtual teams are expressed in better control and coordination, in reducing loss of time, in reducing costs, and in creating a high quality product (Baker, Baker, 1992).
Conclusion

In conclusion, it is unnecessary to say that the processes of globalization, combined with the dynamic development of technology, raise exceptional challenges to business. Traditional organisations, although existing around us, are already an anachronism. This 21st century will be the century of virtual teams, the century of network organisations consisting of virtual units networked with others. And not only that. In recent times, it is intensely talked about new organisational forms that are, by their very nature, virtual, namely - for co-working spaces. Both in Europe and in other parts of the world it is being actively experimented with these new organisational forms. Based on her research, Radović Marković (2008), it is necessary to match the business environment that is more networked within and among companies. The ability to manufacture value will have to be distributed across the company to a much greater extent than in the past.

References


**Article history:**

- Received 10 April 2014
- Accepted 22 June 2014
The importance of Management for Growing and Developing Agribusiness SMEs: Designing a Conceptual Framework

Abol-Ghasem Arabiun

Abstract

Innovation and entrepreneurial activities play a key role in promoting rural economic progress (Escalante, Turvey, 2006). They are the crucial ingredients towards economic growth and job creation. Promoting these activities should take into account recent structural changes in agriculture and in rural communities. So in recent development plans of Iran have been attended to create and develop agribusiness SMEs, because of the vast context of agribusiness and its potential to develop enterprises. Much number of conditions affect on developing agribusiness. Identifying these conditions is essential to facilitate agri-enterprise SMEs. We can categorized these conditions in three major environment including physical, economical and socio-cultural environment or as a different capital contain economic, social and environmental capital. All of these categories contain many different elements. One of this elements is management that acting as a coordinator of these capital in the best way to achieve the goal of business. This is a documentary and internet based study. It is a try to do meta-analysis the findings of the studies that they have been done in related subject to find conditions and a framework for agri-entrepreneurship.

KEYWORDS: agriculture, entrepreneurship, agri-business, SMEs

JEL:P13, L26

4 Entrepreneurship Faculty, Tehran University, Iran,
e-mail: arabiun@ut.ac.ir
Introduction

In different economic sectors, agriculture sector has an important role to increase entrepreneurial and employment opportunities. This sector accounts for nearly 31% of Iran’s Gross Domestic Product and employs about 23% of its labor force (President Deputy and Strategic Planning and Control, 2010). Through making and implementing some good and appropriate policies, especially in the field of agro-entrepreneurship, using the whole of the capacity of agriculture sector will be possible. So In the recent economic, social, political and cultural development plans of Islamic Republic of Iran, especially 3th, 4th and 5th development plans, have been focused on improving entrepreneurship in Rural area and agriculture sector (The Expediency Discernment Council of the System, 2000 and 2004 and 2008). Achieving this goal need to be recognized the conditions that they affect on agro-entrepreneurship in agribusiness. Voslee (1994) asserts that a conceptual understanding of entrepreneurship and its role in the process of economic development. Therefore this study pursues the goal to identify the conditions of agro-entrepreneurship and designing a framework for it. The research method of this study is a meta-analysis of some researches and studies that they do in relation with this subject.

Agribusiness: Concept and the Conditions Affected It

The broad concept of agribusiness has been formulated in the middle of last century by Davis and Goldberg (1957). According to their definition agribusiness includes the sum total of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm and the storage, processing, and distribution of farm commodities and items from them (BEČVÁŘOVÁ, 2005). So agribusiness represents very complex business system with three segments:

— First, pre-farm – which includes production of organic inputs;
— Second, farm – which includes agricultural production; and
— Third, post-farm – which includes processing (industrial and craft) and sale of agricultural-food products (Maletič, Ceranić, 2010).

This vast context of agribusiness makes Agri- business as an especially interesting field for small and medium agri-enterprise (Maletič, Ceranić, 2010).

Records have shown that Agri-SMEs(Small and Medium Enterprises-SMEs) can be found everywhere in the society. They include agribusiness farm firms, fast food enterprises, lather enterprises, bakeries, fisheries, poultries and the related Firms etc. Because of Agri-SMEs significant roles in the local and national development and growth of various economies, they have aptly been referred to as “the engine of growth” and catalysts for socio-economic transformation of any country. Agri-business represents veritable vehicles for the achievement of national economic objectives of poverty reduction and employment and agri-entrepreneurship generation (Onwumere, 2008).

Nonetheless agricultural businesses often are more challenged to deal with highly risky business situations than businesses in other industries. Business risks in agriculture, due to, weather and pest infestations, marginality and low access to facilities etc, is so high and could cause wide swings in farm production (Escalante, Turvey, 2006). In addition of natural factors many other elements influence agribusiness. Therefore growing and
developing agribusiness need to improve the conditions and environment of agricultural business. In different documents, it has been mentioned different conditions in several categories with various names.

Existing research clearly indicated that some characteristics are conductive to agribusiness development. Pages and Markley (2004) cited four following key factors that appear to be important: (1) Diverse Capital Sources; (2) An Enabling Culture; (3) Entrepreneurial Networks; and (4) Supportive Infrastructure/Effective Public Support.

Running an enterprise successfully requires substantial tangible resources, including physical and financial capital (Lans, 2005; Bosma et al., 2000), human capital (age, education, experience in the branch, abilities and skills, competences etc) (Mizumoto, Saes, 2010; Bosma et al., 2000; Marshall, Samal, 2006) entrepreneurial capital (Erikson, 2000) and social capital (Having contact with other agribusiness actors in networks) (Bosma et al., 2000). In addition strategies for keeping up with business demands and innovativeness are the other important determinants of developing agri-enterprise (Ketelaar-de, 2002). Harding (2002) mentioned that human capital has a direct effect on the ability of the entrepreneur to secure financial capital for ventures (Marshall, Samal, 2006).

Stuart and Edward (2004), as cited in Sojasi Qeidari (2008), present a model of integrating this capitals (figure 1).

![Fig.1 - Model of integrating capitals](source: Stuart, Edward, 2004 cited in Sojasi Qeidari, 2008)

Indarti and Langenberg (2010) identified key components to be important in analyzing the growth of SMEs and entrepreneurial success.

At first is the characteristics of the role players in establishing or developing agribusiness. In relation with human capital, two basic approaches can be distinguished. The first focuses on personal traits and characteristics, the second on competences (Lans et al., 2005). The characteristics are Age, Gender, Work experience, Education (Indarti, Langenberg, 2010); and Personal and psychological factors include perseverance, energy, diligence, resourcefulness, creativity, foresight, initiative, versatility, intelligence and perceptiveness Entrepreneurial characteristics (Lans et al., 2005).
In addition education (Indarti, Langenberg, 2010; Onwumere, 2008), lifelong learning (Lans et al., 2004) extension services, and training have direct influence on individuals to develop an enterprise or SME in agriculture sector (Onwumere, 2008).

Entrepreneurial competence is one of the important elements of creating and developing a business. Entrepreneurs are essentially the engines of growth for a nation (Mishra, 2003). Man et al. (2002) categorized entrepreneurial competences in six key areas of related competences (Table 1).

Table 1: Competence clusters with description and underlying competences

<table>
<thead>
<tr>
<th>Competence cluster</th>
<th>Description</th>
<th>Refers to</th>
</tr>
</thead>
</table>
| 1   Opportunity competences | Competences related to recognizing and developing market opportunities through various means | • General awareness  
• International orientation  
• Market orientation  
• Information-seeking |
| 2   Relationship competences| Competences related to person-to-person or individual-to-group based interactions | • Communication  
• Negotiation  
• Networking  
• Persuasiveness  
• Teamwork |
| 3   Conceptual competences  | Competences related to different conceptual abilities which are reflected in the behaviour of the entrepreneur | • Conceptual thinking  
• Problem analysis  
• Vision and judgment |
| 4   Organizing competences  | Competences related to the organisation of different internal, external, human, physical, financial and technological resources | • HRM/HRD  
• Leadership  
• Planning and organisation |
| 5   Strategic competences   | Competences related to setting, evaluating and implementing the strategies of the enterprise | • the defining of a farm’s mission  
• transferring this mission into objectives, after conducting an internal and external analysis  
• formulating a strategy to achieve these objectives  
• implementing and evaluating the strategy |
| 6   Commitment competences  | Competences that drive the entrepreneur to move ahead with the business.     | • Self-management  
• Value clarification  
• Vision |

Source: Man et al., 2002; Bergevoet et al., 2005

The characteristics of the enterprise including origin of enterprise, Length time in operation, Size of enterprise, Capital source are the second component of enterprise success (Indarti, Langenberg, 2010). McMahon (2001) found that enterprise size and greater dependence upon external finance significantly linked to better business performance. Larger enterprises were found to have a higher level of success (Onwumere, 2008). Kristiansen, Furuholt, & Wahid (2003) found that length time in operation and financial flexibility were significantly linked to business success.
The third is contextual variables that are containing Marketing, Technology, Information access, Entrepreneurial readiness or in other word self-efficacy, Social network, Legality, Capital access, Government support and Business plan.

Access to market, New market opportunities (findings new products or services to offer existing customers and obtaining new customers), market stability (high proportion of regular customers) are, crucial for preserving high growth in the business (Indarti, Langenberg, 2010).

Technology has a close relationship with improvement of production process. Therefore it is crucial in agriculture sector for creation or developing agribusiness. Besides Gundry et al. (2003) and Indarti and Langenberg (2010) disclosed that, technology has a close relationship with market growth.

Access to new information is indispensable for the initiation, survival and growth of enterprise (Duh, 2003; Kristiansen, 2002; Mead, Liedholm, 1998; Swierczek, Ha, 2003).

Entrepreneurial readiness or self-efficacy provides the foundation for human motivation and belief about their capabilities (Indarti, Langenberg, 2010).

The study of entrepreneurship has increasingly reflected the general agreement that entrepreneurs and new companies must engage in networks to survive (Huggins, 2000). Networks represent a means for entrepreneurs to reduce risks and transaction costs and also to improve access to business ideas, knowledge and capital (Aldrich, Zimmer, 1986).

Suitable legislation can strengthen the creation and improvement a business. Duh (2003) found that Unsuitable is also found of obstacles faced by Slovenian SMEs.

Access to capital is obviously one of an important elements to the start-up a new businesses. Potential sources of capital may be formal or informal sources like as personal savings, extended family networks, community saving and credit systems, or financial institutions and banks (Indarti, Langenberg, 2010).

Now a day many governments have been paying a more attention to developing entrepreneurship by promoting agribusiness in order to strengthen national economy (Indarti, Langenberg, 2010). This supportive activity is so important to developing enterprise (Onwumere, 2008). Iran government has focused on the developing enterprise and SMEs especially in agriculture sector till last decade and support the investing on developing agribusiness.

Also, it is important for developing agribusiness to recognize the increasing importance of global trade and the potential for new and larger markets for trade and finance (Röttger, Da Silva, 2008a).

Manasov (2006), stated that the main factors affecting more effective agriculture growth and development of agri-enterprise could be grouped under these categories; Machinery, markets, quality of products, export composition, cost of credit and technical and market knowledge, farm productivity.

Also The key success factors for agribusiness development in Tanzania are capacity building and producer empowerment, the introduction of contract farming, improving access to credit, having enhanced dialogue among stakeholders, ensuring sustainability, good governance (e.g. strict accounting, monitoring and quality control), introducing enhanced competition and introducing improved technology (Röttger, Da Silva, 2008c).

In other study asserts that on three basic forces that drive change in modern agribusiness sector. They are:

(1) The globalization of markets,
(2) The rapid advances in technology and
(3) The greater involvement of people in what is produced and how it is produced.

These changes affect the competitive environment of the agricultural enterprise and influence their choice of structural and conceptual decisions for future. The market access, the competitive intensity and the market power have been identified among the main (external) factors that determine economic prosperity of contemporary producers within agribusiness. In addition according to Lundy et al (No Date), some elements in relationship to market affect on improving agribusiness are involved:

**Market integration:** The effects of market liberalization and globalization fuelled by innovations in finance, communications and transport are having profound effects on how business is being conducted within the agricultural and food sectors. These changes have significantly increased competition around the world as new market opportunities have become open to trade. For farmers in developing countries, the level of liberalization has been profound and nowadays, farmers are not only competing with their neighbors but with farmers from neighboring countries and further afield. The situation is complicated by the fact that some farmers receive subsidies and have greater levels of tariff protections than others and yet all compete in a general marketplace.

**Market concentration:** one of the consequences of these changes has been a rapid concentration of market power away from producers into the hands of a limited number of trade and retail companies.

**Public sector reform:** at the developing nations level, reforms in the public sector, often termed structural adjustment, have resulted in privatization, decentralization and a greater participation of the private sector and grassroots groups in decision making and processes of reform.

**Other market trends, health, food safety, specialization:** In addition to the market policy Changes, there are numerous market trends being led by consumers and processors who are Increasingly demanding agricultural products with greater quality, safety, and traceability.

The entrepreneurial environment formation and its impact on the agricultural firms can be depicted as in Figure 2 (Dunne,Collins 2001 cited in BEČVÁROVÁ, 2005).
In other perspective, Stathopoulou et al (2004) introduced three major environments including (1) physical environment; (2) social environment; and economic environment that influenced growing and developing agribusiness (Table 2).
Table 2: The environment and their elements affected agribusiness

<table>
<thead>
<tr>
<th>Environment</th>
<th>Elements</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical environment</td>
<td>Location(Location is related to the distance from major markets and accessibility to customers, suppliers, information sources and institutions) natural resources, climate and the topography-relief of the area landscape</td>
<td>Stathopoulou et al., 2004; Röttger and Da Silva, 2008c</td>
</tr>
<tr>
<td>social environment</td>
<td>social capital( civic society and networks) governance( a complex set of institutions and actors compiled by government authorities, agencies and non-governmental organisations NGOs)cultural heritage</td>
<td>Ronning, L. and E. Ljunggren, 2007; Stathopoulou et al., 2004; Brockhaus and Horwitz, 1986; Elfring, 2000</td>
</tr>
<tr>
<td>economic environment</td>
<td>investments in infrastructure, existence and operation of business networks level of information and communication technologies</td>
<td>Stathopoulou et al., 2004; Röttger and Da Silva, 2008c</td>
</tr>
</tbody>
</table>

Rokn-al-din Eftekharii et al. (2008), assert on four categories containing Economical, social, environmental and institutional factors.

In addition these factors and environments, Policies are one of the key elements of the enabling environment for agribusiness development in each country.

For example Kenya has attempted to improve the enabling environment for agribusiness by expanding and upgrading these policies:

- Trade policies, including export promotion policies and incentives schemes for foreign direct investment, concessionary import duties on machinery, raw materials, and intermediate inputs;
- The Structural Adjustment Policies (trade liberalization, price controls, and privatization);
- The Regional Economic Integration Policy
- The legal and regulatory framework, including improved customs procedures, food safety and standards, labeling and certification, etc (Röttger, Da Silva, 2008b).

Furthermore Shehrawat (2006), showed that marketing opportunities, marketing and financial factors and easy availability of finance, Identification of market, information and Knowledge about market and organizing skill oriented and entrepreneurial awareness training programs frequently comprising the areas of quality management, marketing management, sophisticating packaging techniques, marketing techniques, financial management, resource and manpower management are essential for economically viable agro-business units.
With a planning perspective, Baruah (2010) has introduced the important requisites for success in agribusiness. They are including of:

1. **Clean objectives:** The objectives set forth should be realistic and clearly defined. Then, all the business efforts should be geared to achieve the set objectives. In a way, objectives are destination points for an agribusiness.

2. **Planning:** Planning is a pre-determined line of action. The accomplishment of objectives set, to a great extent, depends upon planning itself. It is said that it does not take time to do thing but it takes time to decide what and how to do. Planning is a proposal based on past experience and present trends for future actions. In other words, it is an analysis of a problem and finding out the solutions to solve them with reference to the objective of the farm.

3. **Sound organisation:** An organisation is the art or science of building up systematical whole by a number of but related parts. Organisation of business is a harmonies combination of men, machine material, money management etc. so that all these could work jointly as one unit, i.e. “business” “the agribusiness”. Organisation is, thus such a systematic combination of various related parts for achieving a defined objective in an effective manner.

4. **Research:** Today the agricultural production philosophy “produce what the consumer wants”. “Consumers” behaviour is influenced by variety of factors like cultural, social, personal and psychological factors. The business needs to know and appreciate these factors and then function accordingly. The knowledge of these factors is acquired through market research. Research is a systematic search for new knowledge. Market research enable a business in finding out new methods of production, improving the quality of product and developing new products as per the changing tastes and wants if the consumers.

5. **Finance:** Finance is said to be the life-blood of business enterprise. It brings together the land, labor, machine and raw materials into production. Agribusiness should estimate its financial requirements adequately so that it may keep the business wheel on moving. Therefore, proper arrangements should be made for securing the required finance for the enterprise.

6. **Proper plant location, layout and size:** The success of agribusiness depends to a great extent on the location. Where it is set up. Location of the business should be convenient from various points of view such as availability of required infrastructure facilities, availability of inputs like raw materials, skill labor, nearer to the market etc. Hence the business men must take sufficient care in the initial stages to selected suitable location for his business.

7. ** Harmonious relations with the workers:** In an agribusiness organisation, the farmer operator occupies a distinct place because he/she is the main living factor among all factors of production. In fact, it is the human factor that makes the use of other non-human factors like land, machine, money etc. Therefore, for successful operation of business, there should be cordial and harmonious relations maintained with the workers/labors to get their full cooperation in achieving business activities.

8. **Efficient management:** One of the reasons for failure of business often attributed to as their poor management or inefficient management. The one man, i.e. the proprietor may not be equally good in all areas of the business. Efficient businessman can make proper use of available resources for achieving the objectives set for the business.
Management as an Important Element For Developing Agribusiness

Based on aforementioned above, we can find management as one of the important elements for developing agribusiness. Undoubtedly any organisation, whether new or old, whether small or big need to run smoothly and achieve the goals and objectives which it has set forth.

Management has been described as a social process involving responsibility for economical and effective planning & regulation of operation of an enterprise in the fulfillment of given purposes. It is a dynamic process consisting of various elements and activities. These activities are different from operative functions like marketing, finance, purchase etc. Rather these activities are common to each and every manager irrespective of his level or status (Management study guide, 2010).

According to a functional viewpoint the concept of management is what a manager does. The functional concept as given by some of the authors is given below:

— James L. Lundy, “Management is principally the task of planning, coordinating, motivating and controlling the effort of others towards a specific objective. Management is what manager does. It is the task of planning, executing and controlling."

— George R. Terry, "Management is a distinct process consisting of planning, organizing, activating and controlling performed to determine and accomplish the objective by the use of human beings and other resources."

— Howard M. Carlisle, "Management is defined as the process by which the elements of a group are integrated, coordinated and/or utilized so as to effectively and efficiently achieve organisational objectives."

— Henry Fayol, "To manage is to forecast, and plan, to organize, to command, to coordinate and to control(Rajputbrotherhood, 2010)

Different experts have classified functions of management. According to George & Jerry, “There are four fundamental functions of management i.e. planning, organizing, actuating and controlling”. According to Henry Fayol, “To manage is to forecast and plan, to organize, to command, & to control”. Whereas Luther Gullick has given a keyword 'POSDCORB’ where P stands for Planning, O for Organizing, S for Staffing, D for Directing, Co for Co-ordination, R for reporting & B for Budgeting. But the most widely accepted are functions of management given by Koontz and O'Donnel i.e. Planning, Organizing, Staffing, Directing and Controlling. For theoretical purposes, it may be convenient to separate the function of management but practically these functions are overlapping in nature i.e. they are highly inseparable. Each function blends into the other & each affects the performance of others (Management study guide, 2010)
Describing these functions helps to clarify the importance and necessities of management for developing a business.

**The base function is: Planning**

It is the foundation area of management. It is the base upon which the all the areas of management should be built. Planning requires administration to assess; where the company is presently set, and where it would be in the upcoming. From there an appropriate course of action is determined and implemented to attain the company’s goals and objectives. Planning is an unending course of action (Pakhare, 2010).

Planning is involved in the formulation of one or more detailed plans to achieve optimum balance of needs or demands with available resources. The planning process (1) identifies the goals or objectives to be achieved, (2) formulates strategies to achieve them, (3) arranges or creates the means required, and (4) implements, directs, and monitors all steps in their proper sequence (Business Dictionary, 2010).

**The subsequent function is: Organizing**

The second function of the management is getting prepared, getting organized. It is the process of bringing together physical, financial, and human resources and developing productive relationship amongst them for achievement of organisational goals. According to Henry Fayol, “To organize a business is to provide it with everything useful or its functioning i.e. raw material, tools, capital and personnel’s”. To organize a business involves determining & providing human and non-human resources to the organisational structure. Organizing as a process involves:

- Identification of activities.
- Classification of grouping of activities.
- Assignment of duties.
- Delegation of authority and creation of responsibility.
- Coordinating authority and responsibility relationships (Management study guide, 2010).
The third function is: Staffing

It is the function of manning the organisation structure and keeping it manned. Staffing has assumed greater importance in the recent years due to advancement of technology, increase in size of business, complexity of human behaviour etc. The main purpose of staffing is to put right man on right job i.e. square pegs in square holes and round pegs in round holes. According to Kootz & O'Donell, “Managerial function of staffing involves manning the organisation structure through proper and effective selection; appraisal & development of personnel to fill the roles designed on the structure”. Staffing involves:

- Manpower Planning (estimating man power in terms of searching, choose the person and giving the right place).
- Recruitment, selection & placement.
- Training & development.
- Remuneration.
- Performance appraisal.
- Promotions & transfer (Management study guide, 2010).

The fourth function is: Directing

It is that part of managerial function which actuates the organisational methods to work efficiently for achievement of organisational purposes. It is considered life-spark of the enterprise which sets it in motion the action of people because planning, organizing and staffing are the mere preparations for doing the work. Direction is that inert-personnel aspect of management which deals directly with influencing, guiding, supervising, motivating sub-ordinate for the achievement of organisational goals. Direction has following elements:

- Supervision
- Motivation
- Leadership
- Communication

Supervision- implies overseeing the work of subordinates by their superiors. It is the act of watching & directing work & workers.

Motivation- means inspiring, stimulating or encouraging the sub-ordinates with zeal to work. Positive, negative, monetary, non-monetary incentives may be used for this purpose.

Leadership- may be defined as a process by which manager guides and influences the work of subordinates in desired direction.

Communications- is the process of passing information, experience, opinion etc from one person to another. It is a bridge of understanding (Management study guide, 2010).

The final function is: Controlling

Control, the last of five functions of management, includes establishing performance standards which are of course based on the company’s objectives. It also involves evaluating and reporting of actual job performance. When these points are studied by the management then it is necessary to compare both the things. This study on comparison of both decides further corrective and preventive actions.

Effective and efficient management leads to success, the success where it attains the objectives and goals of the organisations. Of course for achieving the ultimate goal and aim management need to work creatively in problem solving in all the five functions.
Management not only has to see the needs of accomplishing the goals but also has to look in to the process that their way is feasible for the company. Controlling has following steps:

- Establishment of standard performance.
- Measurement of actual performance.
- Comparison of actual performance with the standards and finding out deviation if any.
- Corrective action (Management study guide, 2010).

The glimpse of management functions shows the important role of management in developing and succeeding a business. Management improves the business through:

1. **It helps in Achieving business Goals** – It arranges the factors of production, assembles and organizes the resources, integrates the resources in effective manner to achieve goals. It directs group efforts towards achievement of pre-determined goals. By defining objective of organisation clearly there would be no wastage of time, money and effort. Management converts disorganized resources of men, machines, money etc. into useful enterprise. These resources are coordinated, directed and controlled in such a manner that enterprise work towards attainment of goals.

2. **Optimum Utilization of Resources** – Management utilizes all the physical & human resources productively. This leads to efficacy in management. Management provides maximum utilization of scarce resources by selecting its best possible alternate use in industry from out of various uses. It makes use of experts, professional and these services leads to use of their skills, knowledge, and proper utilization and avoids wastage. If employees and machines are producing its maximum there is no under employment of any resources.

3. **Reduces Costs** – It gets maximum results through minimum input by proper planning and by using minimum input & getting maximum output. Management uses physical, human and financial resources in such a manner which results in best combination. This helps in cost reduction.

4. **Establishes Sound Organisation** – No overlapping of efforts (smooth and coordinated functions). To establish sound organisational structure is one of the objective of management which is in tune with objective of organisation and for fulfillment of this, it establishes effective authority & responsibility relationship i.e. who is accountable to whom, who can give instructions to whom, who are superiors & who are subordinates. Management fills up various positions with right persons, having right skills, training and qualification. All jobs should be cleared to everyone.

5. **Establishes Equilibrium** – It enables the organisation to survive in changing environment. It keeps in touch with the changing environment. With the change is external environment, the initial co-ordination of organisation must be changed. So it adapts organisation to changing demand of market / changing needs of societies. It is responsible for growth and survival of organisation.

6. **Essentials for Prosperity of Society** – Efficient management leads to better economical production which helps in turn to increase the welfare of people. Good management makes a difficult task easier by avoiding wastage of scarce resource. It improves standard of living. It increases the profit which is beneficial to business and society will get maximum output at minimum cost by creating employment opportunities which generate income in hands. Organisation comes with new products and researches beneficial for society (Management study guide (a), 2010).
So management can affect all aspects and elements of a business and especially agribusiness SMEs and improve all conditions that they are in relationship with developing and SMEs.

Based on aforementioned we can design a frame work for developing and growing agribusiness (figure4).

![Diagram](image-url)
Conclusion

As a conclusion we decided to comparison a process of developing agribusiness with a life cycle of a cultivated plant and its needs. In this framework agribusiness has the role of a seed with the potential of growth. Growing this seed is depending on some environmental condition and some resources. In nature a seed needs to soil, water, climate and a farmer to care it and to direct the process of growing. In this simulation soil, water and air as crucial factors for growing a plant are equal with physical and financial environment and Also Farmer is an entrepreneur living in socio-cultural environment. If we want to achieve a good product we should educate and empower the farmer to improve his/her knowledge, skill and competence in agricultural work. This farmer can integrate and use the capacities of different environments. So he/she selects a suitable kind of plant on the base of environmental conditions (kind of business) and cultivates his/her farm (providing basic needs for an enterprise such as financial and human resources and technology) and then planting the seed (start up enterprise). Certainly the affects of environment will be continued in the growth period and farmers must be capable to accept, control and manage them. Supportive policies making by government is so important there.

Farmer relationship with the other farmers, farmer’s organisations and public or private organisation make a good situation for getting information, interaction and reducing the risk of agriculture (social capital and network). In the operation time Farmer must be planning for pest and weed control and irrigation (an entrepreneur must be a pathologist to identify the problems of his/her enterprise and control them). All of these need to a high level of competencies so that extension education services and lifelong learning are vehicles for reaching to them. At last each planting has a product. In harvesting phase the farmer harvest her/his farm product (product of business) and send to market. Access to market and information about it, ability of marketing, access to transportation and information and communications infrastructure, the quality of product, price, and trade and export policy is very important in this stage. The importance of these elements in a success agribusiness is completely obvious. Undoubtedly global environment and international trade policies have direct or indirect impacts on this process.

Based on aforementioned elements and conditions for developing agribusiness SMEs and enterprise some recommendations are presented:

**Recommendations at the macro policy level include:-**

1. Eliminate export subsidies of agricultural commodities from developing nations.
2. Reduce internal agricultural subsidies to selected agricultural commodities in developed nations, starting with products where temperate producing countries have no comparative advantage, such as rice, milk and sugar.
3. Reduce or eliminate escalating tariffs on processed agricultural goods supplied from developing nations into OECD countries, as indicated by EBA.
4. manage the supply of basic commodities to avoid overproduction,
5. Evaluate market effects when support agencies consider large scale investments in production based support programs;
6. Invest in value adding enterprises to increase income and reduce exports of primary goods.
Recommendations at the national level in developing countries:

1. Promoting alliance between the private sector in value chains,
2. Improving access to natural resources and basic infrastructure and services
3. Strengthening the rural business environment through the support of business development services, involving temporary subsidies;
4. Strengthening the human capital of international, national and local rural development agencies to implement business oriented rural projects.

Recommendations at the micro-level to support agribusiness development:

1. Promoting participatory methods that directly involve local chain actors in decision-making and develop local capacity;
2. Stimulating collective action and organisation of rural economic organisations
3. Encouraging on-farm intensification, diversification and adding value locally in rural areas
4. Strengthening the market;
5. Generate and promote technologies related to small-scale agricultural production, including information and communications systems, low-external-input-sustainable-agriculture (LEISA), and other value adding intensification, rural electrification, irrigation and water management
6. Promoting appropriate forms of diversification such as fruits, vegetables, livestock, handy crafts and eco-tourism.
References


Article history:
- Received 18 May 2014
- Accepted 24 June 2014
Value Chain analysis for opportunity exploitation in software industry

Jahangir Yadollahi Farsi\textsuperscript{5}, Behroz Zarei\textsuperscript{6}, Lashgari Mahdi\textsuperscript{7}

Abstract

Competitive advantage defines a powerful tool that strategic managers need for recognizing and increasing company’s competitive advantage, this tool is called the value chain. Famous software companies in the world have been able to capture the market of software products by good understanding of the market, value chain analysis and appropriate planning. Software value chain includes effective and important components in creating competitive advantage that should be analyzed. In this study the effective factors in competitive advantage and analysis of software value chain components are discussed. Research methodology is mixed of qualitative – quantitative and practical method. After reviewing the literatures and gathering researches since 2000 to 2012, using interviews and analysis of qualitative data with coding them, important and effective components of software value chain were identified and by the use of these components questionnaire was developed. After distributing the questionnaire, factor analysis was accomplished to identify the major components of the value chain in the software development. Finally, components analysis of the software value chain was done for enhancing competitive advantage compared with competitors.

KEYWORDS: value chain analysis, critical success factors, opportunity exploitation, software industry

JEL:L69

\textsuperscript{5} Faculty of Entrepreneurship, University of Tehran, Iran, e-mail: jfarsi@ut.ac.ir
\textsuperscript{6} Faculty of Entrepreneurship, University of Tehran, Iran
\textsuperscript{7} Faculty of Entrepreneurship, University of Tehran, Iran
Introduction

Value chain analysis offers opportunity to managers to separate company’s activities like designing, manufacturing, marketing, distribution of goods and services. All of value activities that are performed by a company in the industry have common factors that competitive advantages can be obtained by them.

Software giants have been able to capture the market of software products by identifying competitive advantages, good understanding of the market and appropriate planning. These products cover a large part of the requirements. The markets have been captured by these companies so that it will be hard for newcomers to compete with them. So by finding new competitive advantages in software industries, identifying value chain components, and focusing on value chain analysis of this industry, opportunity exploitation of main value chain components, with mechanisms such as selection of appropriate distribution channels, maintenance and software upgrades, advertising and laying plot, we can be hope to get a suitable share of the market.

Critical success factors are “those characteristics, conditions or variables that, when properly sustained, maintained or managed, can have a significant impact on the success of a firm competing in a particular industry.” (Leidecker, Bruno, 1984; Leidecker, Bruno, 1987). According to John F. Rockart (1979), critical success factors are the limited number of areas in which results, if they are satisfactory, will insure successful competitive performance for the organisation (Rockart, 1979, p.85). As a result, the critical success factors are areas of activity that should receive constant and careful attention from management (Rockart, 1979, p.85; Bullen, Rockart, 1981, Rockart, 1982).

According to definitions of Rockart (1979), Christin V. Bullen (1981), Joel K. Leidecker (1984, 1987) and Albert V. Bruno (1984, 1987) about critical success factors that were mentioned above, in this paper we used concept of critical success factors for identifying important and effective components of software value chain to create competitive advantage.

An opportunity is an idea or dream that is discovered or created by an entrepreneurial entity and that is revealed through analysis over time to be potentially lucrative (Short et al., 2010, p.55). The roots of the opportunity concept are found in Austrian economics. According to Israel M. Kirzner (1973), the defining characteristic of entrepreneurs is that they are “able to perceive opportunities for entrepreneurial profits; that is, they are able to see where a good can be sold at a price higher than that for which it can be bought”. With Joseph Schumpeter (1934), there is another eminent Austrian – at least by birth – among the pioneering thinkers on entrepreneurship. Schumpeter does not explicitly feature the opportunity concept. Instead, his point of departure is the notion of innovation characterized as “new combination”. The entrepreneur is an individual who creates a new combination and pursues it in the market (Buenstrof, 2007, p.324-325).

Opportunity exploitation refers to building efficient, full-scale operations for products or services created by, or derived from, a business opportunity (Choi et al., 2008, p.335). Exploitation is, in turn, associated with the production startup milestone or, said differently, full-scale operation, which requires full commitment of the new venture's resources in building efficient production and business systems (Choi et al., 2008, p.335). Exploitation of entrepreneurial opportunities is realized through the creation of new companies and individual risks. Thus, identifying effective components in value chain for
opportunity exploitation in software industry is the start of new companies establishment and successful continuation of entrepreneurial activities. Most opportunities that recognized, don’t lead to correct exploitation and operation. That's because the exploitation, venture creation and foundation of new company depend on factors that entrepreneurs do not pay attention to them. To identify these factors, the context of critical success factors is used. For this purpose, the entrepreneurial process models for identification of critical success factors and value chain components in exploiting opportunities are inspected. William B. Gartner (1985) in process model mentioned that four elements including, individual(s), organisation, environment and process are involved in creating a new company. All these factors have a direct connection with the creation of new companies that are depicted in Figure 1 (Gartner, 1985, p.698). Alvaro Cuervo (2005) has suggested a model with integrating three explanations of entrepreneurial activity that includes: personal characteristics, economic environment and institutional environment (Cuervo, 2005, p.229). These factors led to performance and wealth creation.

![Fig.1: New company creation variables](source)

Considering the importance of subject, after introduction and theoretical background sections, conceptual framework and research methodology are presented, and in the next section analysis of findings are investigated and finally conclusion and discussion about this paper are offered.

**Theoretical Background**

Competitive advantages introduces the concept of value chain, a general framework for thinking strategically about the activities involved in any business and assessing their relative cost and role in differentiation (Porter, 1985). Competitive advantage cannot be understood by looking at a firm as a whole. It stems from the many discrete activities a firm performs in designing, producing, marketing, delivering, and supporting its product. Each of these activities can contribute to a firm’s relative cost position and create a basis for differentiation (Porter, 1985, p33).

The value chain, developed by Michael E. Porter (1985) and his associates at the Harvard business school, is a useful method of understanding and controlling the costs involved in a wide variety of organisational enterprises (Boehm, Papaccio, 1988, p.1469). It identifies a canonical set of cost sources or value activities, representing the basic activities an organisation can choose from to create added value for its products (Boehm, Papaccio, 1988, p.1469). The value chain disaggregates a firm into its strategically relevant activities in order to understand the behaviour of costs and the existing and potential sources of differentiation (Porter, 1985, p57). A firm gains competitive advantage by performing these
strategically important activities more cheaply or better than its competitors (Porter, 1985, p57). These are divided into what Porter (1985) calls primary activities (inbound logistics, outbound logistics, marketing and sales, service, and operation) and support activities (infrastructure, human resource management, technology development, and procurement) (Porter, 1985, pp.39-43; Boehm & Papaccio, 1988, p.1469).

To explain the research framework and value chain analysis, Porter's value chain concepts and components that have been examined by Barry W. Boehm and Philip N. Papaccio (1988) for software development should be discussed, and the significance of each component should be divided by considering the overall cost of software development (Figure 2).

**Fig.2: Software development value chain**

*Source: Boehm, Papaccio, 1988, p.1469*

**Primary activities; Inbound logistics** covers activities associated with receiving, storing, and disseminating inputs to products (Porter, 1985, p.39; Boehm, Papaccio, 1988, p.1469). For software it consumes less than 1 percent of the development outlay (For software, the related support activity of procurement is also included here) (Boehm, Papaccio, 1988, p.1469).

**Outbound logistics** covers activities concerned with collecting, storing, and physically distributing the product to buyers (Porter, 1985, p.40; Boehm, Papaccio, 1988, p.1469). Again, for software, this consumes less than 1 percent of the total (Boehm, Papaccio, 1988, p.1469).

**Marketing and Sales** covers activities associated with providing a means by which buyers can purchase the product and inducing them to do so (Porter, 1985, p.40; Boehm, Papaccio, 1988, p.1469). A 5 percent figure is typical of government contract software organisations (Boehm, Papaccio, 1988, p.1469).
Service covers activities associated with providing service to enhance or maintain the value of the product (Porter, 1985, p.40; Boehm, Papaccio, 1988, p.1469). For software, this comprises the activities generally called software maintenance or evolution (Boehm, Papaccio, 1988, p.1469).

Operations covers activities associated with transforming inputs into the final product form (Porter, 1985, p.40; Boehm, Papaccio, 1988, p.1469). For software, operations typically involves roughly four-fifths of the total development outlay (80%) (Boehm, Papaccio, 1988, p.1469).

Support activities: Infrastructure covers such activities as the organisation’s general management planning, finance, accounting, legal, and government affairs of the organisation (Porter, 1985, p.43; Boehm, Papaccio, 1988, p.1469). The 8 percent figure is typical of most organisations (Boehm, Papaccio, 1988, p.1469).

Human resource management covers activities involved in recruiting, hiring, training, development, and compensation of all types of personnel (Porter, 1985, p.42; Boehm, Papaccio, 1988, p.1469). Given the labor-intensive and technology-intensive nature of software development, the 3 percent figure indicated here is a less-than-optimal investment (Boehm, Papaccio, 1988, p.1469).

Technology development covers activities devoted to creating or tailoring new technology to improve the organisation’s products or processes (Porter, 1985, p.42; Boehm, Papaccio, 1988, p.1469). The 3 percent investment figure here is higher than many software organisations, but still less than optimal as an investment to improve software productivity and quality (Boehm, Papaccio, 1988, p.1469).

Margin and service: margin in the value chain is the difference between the value of the resulting product and the collective costs of performing the value activities. As this difference varies widely among software products (Boehm, Papaccio, 1988, p.1469).

![Fig. 3: Value chain effective components in software projects](Source: Chow, Cao, 2008, p. 964)
In Figure 3, presented by Tsun Chow and Dac-Buu Coa (2008), 12 factors of CSFs for success of agile projects have been classified into five categories including: people factors, technical factors, project factors, organisational factors and process factors.

In this paper for identifying effective components in value chain (Figure 2), conceptual dimensions of Figure 1 and Figure 3 were used which are related to software development projects and opportunity exploitation dimensions.

In this paper, the researches since 2000 to 2012 were noted. After several reviews of these papers, those ones were selected that have investigated the critical success factors and most important value chain effective components. After reviewing the papers and results of their investigations with respect to Figure 1 and Figure 3, a summary of research results were classified in Table 1.

**Table 1: Identified value chain effective components via literature review**

<table>
<thead>
<tr>
<th>Effective component in value chain</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organisational Factors</strong></td>
<td></td>
</tr>
<tr>
<td>1 Senior management commitment and support, Leadership</td>
<td>(Cao, 2006), (Chow,Cao, 2008), (Nasir,Sahibuddin, 2011), (Cabinet Office, 2000), (Nfuka, Rusu, 2010), (Boghossian, 2002), (Wang, 2010), (Wan,Wang, 2010), (Niazi et al., 2006), (Habib, 2009), (Sudhakar, 2012), (Sheffield &amp; Lemetayer, 2012), (Prabhaker, 2008), (Fortune, White, 2006)</td>
</tr>
<tr>
<td>2 Environment and Organisational culture</td>
<td>(Cao, 2006), (Chow,Cao, 2008), (Wan,Wang,2010), (Niazi et al., 2006), (Misra et al., 2009), (Habib, 2009), (Sheffield,Lemetayer, 2012), (Fortune,White, 2006)</td>
</tr>
<tr>
<td>3 Team environment, Communication &amp; collaboration, Learning &amp; couching</td>
<td>(Cao, 2006), (Chow,Cao, 2008), (Nasir,Sahibuddin, 2011), (Wang, 2010), (Niazi et al., 2006), (Misra et al., 2009), (Habib, 2009), (Wan, Wang, 2010), (Sudhakar, 2012), (Prabhaker, 2008), (Fortune,White, 2006)</td>
</tr>
<tr>
<td>4 Optimal &amp; real budget, Optimal resource allocation</td>
<td>(Cao, 2006), (Nasir, Sahibuddin, 2011), (Nfuka,Rusu, 2010), (Habib, 2009), (Niazi et al., 2006), (Boghossian, 2002), (Fortune, White, 2006)</td>
</tr>
<tr>
<td>5 Goals, vision and target</td>
<td>(Nasir,Sahibuddin, 2011), (Boghossian, 2002), (Wan,Wang,2010), (Niazi et al., 2006), (Sudhakar, 2012)</td>
</tr>
<tr>
<td>6 Customer Satisfaction</td>
<td>(Niazi et al., 2006), (Misra et al., 2009), (Sudhakar, 2012)</td>
</tr>
<tr>
<td>7 Reward system</td>
<td>(Cao, 2006), (Niazi et al., 2006)</td>
</tr>
<tr>
<td><strong>People Factors</strong></td>
<td></td>
</tr>
<tr>
<td>1 Skills and competencies</td>
<td>(Cao, 2006), (Chow,Cao, 2008), (Nasir,Sahibuddin, 2011), (Cabinet Office, 2000), (Nfuka,Rusu, 2010), (Boghossian, 2002), (Wan,Wang, 2010), (Niazi et al., 2006), (Misra et al., 2009), (Habib, 2009), (Sudhakar, 2012), (Sheffield,Lemetayer, 2012), (Fortune,White, 2006)</td>
</tr>
</tbody>
</table>
Conceptual Framework

The purpose of this study is value chain analysis for exploitation of opportunities in software industry. Figure 2 shows the software development value chain that is developed by Boehm and Papaccio. Figure 3 shows the framework that is suggested by Chow and Cao and 12 major components of the software development are categorized in five dimensions. Figure 1 shows the framework that new venture creation major components for opportunity.
exploitation are categorized in four dimensions. Basis model and conceptual framework of this study is compound of models in Figure 1, Figure 2 and Figure 3. Important and final effective components have been considered and studied in these framework.

Research Methodology

This research method is mixed method (qualitative & quantitative) and practical. Information gathering about the theoretical background of the research has been used with library resources, articles and books. In order to data analysis content analysis, interviews and systematic qualitative research (Open and axial coding) (Glaser, Strauss, 1967; Bazargan, 2008) methods has been used to reduce the classification of effective components. Statistical population of this research is software companies in Tehran.

Sampling method in qualitative part was intentional and non-probabilistic (snowball). Qualified individuals were selected for interviews. Until theoretical saturation (sufficient data), interview was used. Measuring instruments was semi-structured interview. Interviews were conducted with 18 persons from software project management and software industry experts.

Reliability of qualitative part was confirmed by helping research assistant, experts, structural confirmation and revision in the time of coding. After each interview, the collected data with the help of research assistant has been classified and analyzed. After the next interview, previous results were confirmed or rejected by the interviewees.

After analyzing qualitative data by using identified components, questionnaire was prepared for quantitative part. The sampling size method in quantitative part was Cochran's formula. Using Cochran formula and considering the 850 software development companies in Tehran, sample size was identified 264 companies. Random sampling method was chosen for filling out the questionnaire. Tool for quantitative measuring is questionnaire (Likert scale) that questions in it have been chosen based on the literature review and results of interviews.

For measuring content validity of questionnaire, questionareis were distributed among some experts and software industry managers. How much they agreed with each factor in the framework was obtained and validity problems and necessary structural reforms were corrected to meet content validity. Consistency and internal stability was estimated using Cronbach's alpha reliability coefficient. Using the SPSS, reliability of questionnaire (Cronbach's alpha) was obtained for the 44 items that equals to 0.922; it shows good reliability of indicator.

After collecting the acceptable questionnaires, factor analysis was used to reduce components and identifying and classifying the main final components. Factor analysis is any of several methods for reducing correlational data to a smaller number of dimensions or factors; beginning with a correlation matrix a small number of components or factors are extracted that are regarded as the basic variables that account for the interrelations observed in the data (Sarmad et al., 2010).

Finally, quantitative data analysis was accomplished by placing components in the value chain and investigating the rate of importance of components.
Finding Analysis

Qualitative finding analysis

After classifying the research background by help of experts, interviewing with managers of software companies, coding and analyzing for several times 16 effective components of the value chain in exploitation of opportunities in software industry (Table 2) were identified.

Table 2: Software value chain effective components (qualitative part)

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Human Resource Management</th>
<th>Technology Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior management commitment and support</td>
<td>Reward system according to individual morale</td>
<td>Software technologies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service, Marketing &amp; sales</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support, Customer acceptance, Delivery strategy</td>
<td>People Factors</td>
</tr>
<tr>
<td></td>
<td>Skills and competencies, Motivation and effort</td>
</tr>
<tr>
<td></td>
<td>Organisational factors</td>
</tr>
<tr>
<td></td>
<td>Environment and Organisational culture, Communication and Team &amp; Customer collaboration, Distribution and team size</td>
</tr>
<tr>
<td></td>
<td>Process Factors</td>
</tr>
<tr>
<td></td>
<td>Project management process, Change &amp; requirement management, Clear requirement</td>
</tr>
<tr>
<td></td>
<td>Project Factors</td>
</tr>
<tr>
<td></td>
<td>Precise definition of project scope, Appropriate scheduling</td>
</tr>
</tbody>
</table>

Then by using Table 1, Table 2, and results of qualitative data analysis, 44 questions were provided for questionnaire and phrasing of sentences and factors were corrected for greater perception and greater accuracy by help of experts as in second column of Table 3. The final questionnaire was used to collect experts and manager’s opinions of software industry via verbal, e-mail and google docs, and finally 73 completed questionnaires were accepted.

Quantitative finding analysis

After collecting the questionnaires, factor analysis was performed on data, using SPSS with 44 factors (questionnaires’ questions) and using PCA (Principal component analysis). The result of Bartlett's test that is an approximat of chi-squared statistic was calculated. Significant level of Bartlett's test is less than 5% (0.000), indicating that factor analysis is appropriate to identify the model structure and a known assumption about correlation matrix is rejected. The KMO index value was 0.629. As its value is greater than 0.6, the number of samples are adequate for factor analysis.

Identified parts and components by factor analysis showed that the eigenvalue of factors number 1 to 12 are greater than 1 and will be retained in the analysis. These 12 factors can explain 74.229% of the variability (variance) of variables. With reviews of the
rotated component matrix and identifying the highest value in each row, after sorting and placing factor in the respective categories, Table 3 was obtained that according to the background of research, interviews and collaboration of experts, common and more general titles have been considered for 12 factors in the last column.

Table 3: Component categorized and identified factors (factor analysis)

<table>
<thead>
<tr>
<th>Ordered factor according to Factor Analysis</th>
<th>Categorized and identified factors according to Factor Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Project manager's technical expertise</td>
<td>Project management</td>
</tr>
<tr>
<td>2 Arts and project management skills</td>
<td>Commitment and collaboration of project team and customer</td>
</tr>
<tr>
<td>3 The best way people communicate within a team managed by a project manager</td>
<td></td>
</tr>
<tr>
<td>4 Best way cooperating management in project team by project manager</td>
<td></td>
</tr>
<tr>
<td>5 Accompaniment with users and managers by project manager</td>
<td></td>
</tr>
<tr>
<td>6 Well guidance of project management process by the project manager</td>
<td></td>
</tr>
<tr>
<td>7 Software change management according to project scope</td>
<td></td>
</tr>
<tr>
<td>8 Team commitment to the project's success</td>
<td>Requirement clarification and team &amp; customer collaboration</td>
</tr>
<tr>
<td>9 Customer presence in project workspace</td>
<td></td>
</tr>
<tr>
<td>10 Delivery phases of software over short periods regularly and orderly</td>
<td>Small team and appropriate tools</td>
</tr>
<tr>
<td>11 High priority to achieve customer satisfaction during the project</td>
<td>Appropriate marketing</td>
</tr>
<tr>
<td>12 Customer working closely with the development team</td>
<td>Learning and motivation team</td>
</tr>
<tr>
<td>13 Sponsor or top management commitment</td>
<td></td>
</tr>
<tr>
<td>14 Training required to systematically software implementation</td>
<td></td>
</tr>
<tr>
<td>15 Communication and Team &amp; Customer collaboration</td>
<td></td>
</tr>
<tr>
<td>16 Information technology culture and belief in it</td>
<td></td>
</tr>
<tr>
<td>17 Requirements to be well-defined by the customer</td>
<td></td>
</tr>
<tr>
<td>18 Customer requirement clarification for technical team</td>
<td></td>
</tr>
<tr>
<td>19 Small sized team (20 or smaller)</td>
<td></td>
</tr>
<tr>
<td>20 Appropriate operating systems and tools</td>
<td></td>
</tr>
<tr>
<td>21 Well-defined and standard programming</td>
<td></td>
</tr>
<tr>
<td>22 Expertise in marketing and sales in project’s team</td>
<td></td>
</tr>
<tr>
<td>23 Well defined project scope and scheduling</td>
<td></td>
</tr>
<tr>
<td>24 Well-defined scheduling and completion in specified time</td>
<td></td>
</tr>
<tr>
<td>25 Competitor cognition</td>
<td></td>
</tr>
<tr>
<td>26 Scientific marketing and sales</td>
<td></td>
</tr>
<tr>
<td>27 Project team’s motivation to complete the project</td>
<td></td>
</tr>
<tr>
<td>28 Project teams establishment in one place</td>
<td></td>
</tr>
<tr>
<td>29 Learning culture</td>
<td></td>
</tr>
<tr>
<td>30 Collaborative culture instead of hierarchy culture</td>
<td></td>
</tr>
<tr>
<td>31 Oral culture with high value and face-to-face communication style</td>
<td></td>
</tr>
<tr>
<td>32 Convenient workplace, without peripheral issues around the project team</td>
<td></td>
</tr>
<tr>
<td>33 Reward system</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion and Discussion

The concepts offered by Porter (1985), Boehm and Papaccio (1988) which we mentioned above were used for analysis of components and combination of related components in qualitative-quantitative analyzing and factor analysis. Finally the effective and important components in exploitation of opportunities in software industry (Table 4) were classified.

Table 4: Final software value chain effective components

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Technology Development</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong support from the CEO and Avoid prolonged project</td>
<td>Small team and appropriate tools</td>
<td>People Factors</td>
</tr>
<tr>
<td>Appropriate marketing, Good support</td>
<td></td>
<td>Expert existence in technical's and customer’s team</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organisational Factors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning and motivation team, Commitment and collaboration of project team and customer in convenient workplace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Process Factors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project management, Requirement clarification, Revenue assurance</td>
</tr>
</tbody>
</table>

According to table 4, effective and important components in success and competitive advantage of software development industry are classified into 4 total categories. These dimensions include: infrastructure, technology development, operations, and services, marketing and sales. For having competitive advantage in the industry every company should compare the company's value chain with competitors from the point of these aspects and attend to differences and distinctiveness. The most important components are listed below in four sections and there are examined in terms of competitive advantage and cost.

In the infrastructure section, completion of project in specified time is one of the competitive advantages that can reduce costs. In technology development section,
appropriate and efficient tools can accelerate speed of project, cost reduction, and differentiation in quality that ultimately leads to increase competitive advantage compared to competitors. From the perspective of value chain analysis, technology development and infrastructure of company support two types of factors: 1) operations, 2) services, marketing and sales.

Firm infrastructure includes 8% of costs and technology development includes 3% of overall costs that for these sections instead of decreasing the costs there should be increase. Increasing costs in these sections leads to costs reduction in operations section that includes 80% of overall costs with respect to analysis of Boehm and Papaccio (1988).

Better and more services to customer lead to additional value creation and ultimately increasing competitive advantage for the company. The first goal of software manufacturers should be being a customer-oriented company in order to be a leader in finding a competitive advantage over competitors. Marketing and more sales mostly is related to buyer's value chain and can lead to increase company's competitive advantage compared to competitors.

In this paper, people, organisational and process factors are summarized in a category which is named operations, that indicates the close relationship of these factors in acquisition of competitive advantage. With respect to analysis of Boehm and Papaccio (1988), operations include 80% of overall costs in software developing, so cost reduction in this section can be one of the most important features of competitive advantage from the type of cost reduction strategy for the company.

**Recommendation for Future Research**

According to importance of marketing and services, the buyer’s value chain analysis and value added creations through buyer’s channel and investigation of effective factors in this value chain for increasing competitive advantage can be a good subject for future researches.

Also, according to importance of project management in Iran and results of factor analysis that shows project management has the most shares among components, investigating the influence rate of important and effective factors of project management and analyzing these factors to increase competitive advantages can be a good subject for softwarescholars and managers in Iran.
References


Article history:
- Received 29 June 2013
- First Revision 18 March 2014
- Accepted 20 April 2014
Abstract

Accomplishing the purpose of undertakings (earning profits and growth) can be achieved in several ways, among others, using a better product concept. Therefore, there is a constant search for suitable product concept, which enables this purpose in a better way. Actual production concept, known as Customer Relationship Management (CRM), has evolved from the initial customization of products due to technological development. In the relevant available literature, there is no unitary view of the historical development of production concept of customization of products but considering only its individual development stages, depending on what is given greater importance. In this paper, we present the results of conducted theoretical research of production concepts of products customization from the historical point of view, as well as from the standpoint of advantages and disadvantages of certain stages in their development, which also represent a certain theoretical contribution to this field of science. From the results of analysis of the historical context of the individual phases of the development of production concepts of products customization was established that the current production concept was created thanks to ICT, primarily as an upgrade of secondary customization of products, particularly customization of communication. From the analysis of advantages and disadvantages of the individual stages of production concepts, it was found that actual CRM production concept leads in terms of benefits, so it is further discussed in paper. The research also showed that business entities in Serbia apply CRM production concept in insufficient extent to enlarge their competitiveness. The research results have enabled to suggest further research in this area, which is also the practical contribution of paper.

KEYWORDS: research, production, concept, customization, product management

JEL:M31

---

8 Faculty for Business Economy and Entrepreneurship, Belgrade, Serbia, e-mail: mykrstic@gmail.com
9 Faculty for Business Economy and Entrepreneurship, Belgrade, Serbia, e-mail: anaskorup@gmail.com
10 Faculty for Business Economy and Entrepreneurship, Belgrade, Serbia, e-mail: savetavukadinovic@yahoo.com
Introduction

The main purpose of establishment and existence of undertakings is making profit for their founders and satisfying stakeholders. Achieving purpose can be reached in several ways, among others, using a better production concept. Ever since the first production concept to the present, there has been constant search for suitable production concepts, which enable this purpose in a better way.

Actual production concept is known as Customer Relationship Management (CRM), and has evolved from the initial customization of products by suitable transformations, primarily due to the development of technology.

In this paper, authors present results of conducted theoretical survey of production concepts of product customization in two different approaches, namely: from the historical perspective and from the point of view of advantages and disadvantages of certain stages in their development.

In research, we used the following research methods, including:

— method of theoretical analysis, based on the study of literature sources;
— historical method, to analyze the evolutionary stages in development of production concepts of customization.

From the results of analysis of the historical context of the individual development phases of production concepts of product customization of was established that the actual production concept originated primarily as an upgrade of secondary of products customization, especially its part concerning customization of communication, which was later successfully integrated with the functions of sales and marketing.

From the results of analysis of advantages and disadvantages of the individual stages of production concepts, it was found that actual CRM production concept is predominant in terms of benefits. Therefore, in this paper, were further discussed customer - centric business concept, the structure of CRM technology, the development of CRM software, CRM software market, and its connections with social networks.

Since the concept of secondary customization of products is built on the development of information and communication technologies - ICT, it is evident that the CRM production concept depends on applied ICT.

Research has shown that the available literature does not offer a comprehensive review of the historical development of the production concept customization of products, starting from the initial customization to the present concept of CRM. It is also proved that business entities in Serbia apply actual production concept of product customization in insufficient extent to enhance their competitiveness. In this sense, the results of this research have enabled to devise and propose further practical research of CRM application in manufacturing businesses in Serbia.
1. Historical context of production concept of customization

Production concept - primary customization of products was created during the time of manufacturing production, when the user for each expressed need was directly addressed to the appropriate craftsman without the mediation, on the basis of which the craftsmen would "tailored" requested product by the individual creating and in accordance with the requirements of the user (e.g., shoes, clothes, furniture, houses, etc.). For this period is characteristic direct communication user-producer, face to face.

During the period of the first industrial revolution the concept of primarily customized product will gradually replace the production concept of standardized product, which features mass production, industrial making method, lower price, a new way of communication. Massification amount of products significantly reduces cost of products, the market is expanding beyond the immediate environment of manufacturers, production efficiency increases dramatically due to the benefits of standardization, products at an affordable price made available to the growing number of users, between producers and users are included various agents (wholesalers, retailers, dealers, etc.), and communication between producers and users becomes indirect (ANSI2011). Industrial standardization that enabled mutual interchangeability of basic internal components of products, appears in the early 19th century, first at weapons (rifles), then at rail traffic (tracks), and the tendency of diffusion of product standardization is continuing, and by the end of 19th century, majority of industries conducted standardization of their products, (Galvin 2001). The practice of making increasingly complex standardized products of mass production, indicated in certain disharmony that appeared at that concept of production. On one hand, need for greater diversity of products was expressed from users, and on the other hand, offer for averaging tastes of users was expressed from manufacturers.

Mentioned disadvantages of the concept of standardized product are overcome during the second and third industrial revolution.

During the period of the second industrial revolution, there is a new product concept - modularisation of products, in which modular structure of complex products such systems made of individual, functional units (modules), with standardized interfaces and interactions, in accordance with definition of product, whereby replacement of one module in structure to another module, creates a new version of the product. Thus is enabled to increase diversity of choice varieties of products, which is important for individual user. For that period is characteristic indirect communication between users and producers, which is achieved through various intermediaries.

During the period of the third industrial (IT) revolution, old production concept occurs again, but in a new way - a secondary product customization, which is based on the development of information and communication technologies (ICT), given that they are enabled to overcome the lack of averaging tastes of users in terms of mass production, supported by product modularisation (Wiegran, 2000).

Customization of products begins directly by negotiating with the user about the details of the order, continues throughout all phases of the product life cycle, which has impact on further increasing variety of products. Mass production of industrial products is getting a new form of business - mass customization, in which come to the fore economy of scale, but also meeting specific requirements of individual users. This period is characterized again with direct face to face communication between the user and the manufacturer, but it is now realized through ICT.
Precisely request for direct communication, supported with development of ICT, has risen the following production concept - **Customer Relationship Management - CRM**, which represents a business concept that is incorporated system of direct communication, including processes of sales, customer relationship management, collecting overdue obligations, forecasting users needs, knowledge management, human resources management, supply chain, preventing abuse, etc. (Eechambadi, 2007).

Actual production concept is the result of further evolution of CRM production concept in **Social Customer Relationship Management- SCRM** production concept. User behaviour is changing, and in response manufacturers share more information, because they have more resources, create more contents, support other users more than ever through social technologies and the technologies of cooperation, such as Facebook, Twitter, video, review sites, blogs, community platforms, and mobile devices (SCRM, 2013).

This paper explores the mutual influence of relevant historical production concepts of customization of products on the formation of actual production business concept CRM.

### 1.1. Customization of products

Customization is a term derived from the English "custom", meaning that production is carried out flexibly in line with the specific requirements of the user. Unlike rigid standardized production where manufacturers impose their standard products to users, customized production is flexible and products are set according to the requirements of users.

Customization the "art" to, using standard parts and minimal technical intervention in the production process, maximally satisfy stated or default user requirements (Krstić, 2012).

Customized product is a generic product made from standard modules that are combined in a way that user wants.

Customization of products starts by direct negotiation with user about the details of the order, continues during the entire product life cycle (conceptual design, design, production, sales, monitoring outside the warranty period, until its withdrawal from the market), and reflects on greater product differentiation, which further leads to enlarge diversity of products (Sievänen, 2002).

With development of manufacture (individual) production, primary customization occurs as the first form of direct customization. By expansion of ICT technologies, occurs secondary customization, thereby direct face to face communication between manufacturers and users, is established again, but in a completely new way.

Although the manufacturer realizes products intended for the global market, primarily thanks to ICT, he is also able to simultaneously achieve direct communication with each individual end user, in order to meet his specific requirements.

Customization of products takes place parallel with customization of communication and prices.

**Customization of communication** is a way of achieving user interface on relation manufacturer - user by mail, advertising, etc. Spreading the area of customization of communication has led to the need to manage this interface, which later resulted in Customer Relationship Management.

**Customization of prices** is harmonization of product price with the user, and it can be active, when user himself specifies the price he is willing to pay for a particular product or
service, or passive, when the user selects product, and the price is calculated based on product availability, level of capacity utilization, customer loyalty, product profitability, as well as other relevant factors (Wiegran, 2000).

Customization of products takes different forms over time, such as customization anthropology (the process of cultural appropriation), mass customization (the use of computer-aided manufacturing systems to produce custom output), modding (a slang expression for modification of hardware, software, or other items), car tuning (the modification of an automobile, motor bike, scooter or moped), personalization (the use of technology to accommodate differences between individuals), custom-fit (a design term for personalization with geometric characteristics) and bespoke (term used in the UK for custom-made) (Wiki, 2013). From the above, for this work the greatest importance has mass customization.

1.2. Mass customization of products

In the mass customization of products come to the fore the benefits of mass production (economy of scale, continuity of production), as well as the stability of production process, with paying attention to tastes and requirements of individual users.

Unlike mass-produced products, the products of mass customization are assembled from mass-produced modules (components) in order to meet the needs of individual users. As good example of this can be specified products (personal computers) of Dell Computers company, in which the production process is standardized to its limits (production chain and final assembly), unlike the result of that process - products, which is very individualized (Wiegran, 2000).

To support mass customization in terms of achieving sufficient diversity of products on one hand, and satisfaction a range of customer demands, on the other hand, is applied an effective and efficient approach to designing product families, which in the literature can be found under different names, but with the same meaning, namely: "virtual design", "platform projects", "robust design". The basic production concept of product family is obtaining set of maximal possible number of products, through as much as possible standardized set of basic modules and production processes. Designing family of products is closely related to the strategic issues that are important for the whole company, such as: the change or modification of products, the variety of products, standardization of modules and components, production performances, productivity, management of product development, etc. (Xuanfang, 2002).

The mass customization resulted from the model of open innovation, which represents a new trend in today's production, in which comes to the integration of products in line with desires of user. Approach has become popular due to the increasing number of product variants and development of e-business capabilities. Globalization, and it built up global competition, increasingly compels manufacturers to replace production approach based on "seller standpoint" with approach "towards customers and their preferences", which further leads to significant rise of number of alternative products.

The mass customization has also reflected in product development, since leaving the traditional model of product development and introducing model of designing, in which the manufacturer is only great-designer who forms only the basic product, or area of possible solutions, while the user is co-a designer who decides about the final solution. The user becomes a partner, who partaken in creating products. Since users nowadays demand to buy much more than a simple products and seek satisfaction of their specific requirements, which often include
"emotional needs", product design is increasingly directed towards experience, style and personal affinity of users. In other words, mass customization is approach, in which the user is involved in co-designing of products. Changing the concept of product realization to the concept in which manufacturer participates as great-designer of base of possible product, and customer is co-designer, is carried out in order to minimize the risk of failure in meeting individual, specific needs of users (Mihic,2011).

Mass customization at manufacturers is reflected on the following production functions, namely:

(1) Customization of design, which assumes inclusion of users into the product life cycle in phase of emergence and development of product.

(2) Customization of development, which implies involvement of users into the product life cycle in phase of making products, where the option to create predefined design is offered to him.

(3) Customization of assembly, which assumes inclusion of users into the product life cycle in product assembly phase, where options of predefined number of product assembly options by applying standardized modules (components) of product are offered to him.

(4) Customization of distribution, which implies involvement of users into the product life cycle in phase of product delivery, where the user can customize packaging, distribution and location of product delivery (Squire,2004).

Empirical researches have indicated that the customization of products has the greatest impact at function (1), and considerably smaller impact on other functions.

Advantages and disadvantages of product customization concept

Advantages of product customization concept differ on whether the entity carries on business in the traditional way or through e-business.

In the case of business in the traditional way, advantages are reflected in the fact that the concept can: lead to increased volume of sales, help to establish a greater intimacy with user, help to obtain valuable information from user (Sievänen, 2002).

In the case of e-business advantages are reflected in the fact that the concept can provide: the benefits of attracting new site visitors, converting visitors into loyal customers, maximizing the share of revenue from loyal customers, focusing on the sale to loyal customers of products with high margins, informing customers about special production and retail availability, reminding customers at important dates for them (eg, birthdays, etc.); additional benefits for users of already purchased products; to provide users with answers to personal questions, information to users about the status of drawn orders of products; successful implementation of users interface (on-line customer information, presenting information in native language of users, adjusting the level of presentation to the client); advertising targeted focus group of users (for example, the goal is to get into the first 10 pages of Google), ie that which is in accordance with the preferences of users interests; dynamic prices (adjusted to current situation) or customized prices (application of different prices to various users) (Wiegran,2000).

Limitations of product customization concept are reflected in the fact that customization of products: requires further engagement of human resources from manufactures (primarily in the engineering activities which practically additionally engage the most experienced human resources); has small effects on production function, but increases the time for production of components, as well as the time for additional inspection; most often leads to enlarging prices and manufacturer is facing with lower prices from competitors; as a prerequisite requires previously applied modular design that enables achievement of advantages, usually in part of the costs (Sievänen, 2002).
1.3. Customer Relationship Management

Manufacturers were changing their own business concepts over time, starting with the primary customization, through industrial standardization, to secondary customization, which is discussed in more details in Introduction. On customized communication of secondary customization concept was developed Customer Relationship Management business concept - CRM which is a relatively recent phenomenon, developed in the early 90's of the 20th century, and its full recognition gained in beginning of the 21st century.

CRM concept

CRM is primarily a concept of business (or corporate philosophy) that puts user at the center of business in order to maximize profit, which is achieved through increased number of users, as well as their retention, and includes identifying values, which is particularly important for users, as well as for automation of business process that will allow sales, marketing and service efforts to perform effectively and efficiently.

The mission of CRM is to manage relationships with customers that value the most to manufacturer.

CRM concept has a task to process information about the user and to display them in a simple way in order to be applicable in practice. And that means, the data collection and evidence of what user buys, when buys, why buys, what are his preferences, which are his objections to product (or service), what would he try to change, records of users complaints, predictions of customer needs, building user services for help, etc.

CRM enables manufacturers to improve their relationships with customers maximally through systematized use of technology, and based on user information of later analysis. CRM covers a wide range of marketing, sales, service, organisational and technological initiatives. Implementation of CRM applications requires investment and often cause simultaneous changes of business processes and priorities (Eechambadi, 2007)

Producers who take holistic approach to CRM, which favors participation and active user effort and thus they become collaborators and players in process of changing product, will achieve greater success in the realization higher customer satisfaction.

CRM includes methodologies, strategies and software that help manufacturers to treat different customers differently, or to obtain unique look to user. This means that all user data are being in one place, to collect and upgrade them in an organized, unified manner. The user is the center of business around which orbit all other business activities and resources, and thus builds a specific customer - centric business concept.

Customer - centric business concept is business concept in which are fully expressed loyalty and the actual number of profitable customers.

Customer loyalty is becoming a significant business strength of manufactures. Studies have shown that there are numerous reasons why loyalty and retention of existing customers are very much essential, the most important are: selling product to a new user is multiple more expensive (5-8 times) compared to selling products to an existing user; a dissatisfied customer, on average, will introduce his bad experience to a significant number of potential users (8-10 of them); probability of selling to an existing user is 50%, while selling to a new user is about 15%; increase retention of existing customers by 5% a year, can increase manufacturers profits by up
to 85%. The role of CRM is precisely to reveal these 5% of users that can be maintained, and in which pays to invest time and resources. Users today are well informed, their expectations are high and only want the best, and if they get exactly what they want, in the way they want, they will come back again and become loyal customers.

The actual number of profitable customers is a question that many manufacturers often do not have the right answer. Manufacturers usually know the number of signed contracts or transactions processed daily, their percentage share in market compared to competitors, but often lacking the right information regarding the exact number of loyal customers, what amount of products they consume, how they come up with an answer to these questions, or do they generally communicate with the manufacturer. Unlike traditional marketing, where purpose is possibility of defining the major target groups of users, the purpose of CRM is to find each customer individually.

Here CRM is highlighted, based on ICT, that allows a large number of individual users to be informational processed in short-term.

**CRM advantages and disadvantages**

CRM advantages are reflected in understanding the value of each individual user in the entire product life cycle, in fact that were collected complete data about users and been consistently structured, users have been recognized as individuals; in integrated processing of customers through all available communication channels (phone, e-mail, Internet, visits); the fact they put more emphasis on customer retention programs to increase loyalty; in planning strategy of cross-marketing of products; in measuring effects of marketing campaigns and sales activities; in optimization, automation and control of marketing, sales and service processes; in the rationalization of business by saving time and money (Harp, 2003).

CRM disadvantages are reflected in the inconsistency of organisations of manufacturers and ways for sanctioning unprincipled users. The most common CRM disadvantages are those that come from the inconsistent organisation. They arise in a situation where CRM is implemented only within certain parts of manufacturers (for example, marketing, sales, etc.), and does not extend to other organisational segments. Segments of organisation that are facing the user's needs do not represent weak points, but the segments in which CRM is not present.

It can be specified one more phenomenon that deserves attention. Major manufacturers typically have departments dealing with sanctions against unprincipled users. Disciplining the user goes back to period when motto of manufacturer was "we are here for you, not you for us," which is actually anti affirmation of CRM, which includes the management of fraud (fraud management) and collections (collecting non-payments). What makes the difference between collections and fraud applications of the past and today in the era of CRM and open market, is approach in the way of solving the created problem (potential fraud or unpaid obligations). Today manufacturers who apply CRM start with reason why the user did something or why something happened to him, and not with the assumption that they are always right, and user should be sanctioned. Manufacturers who apply CRM should base their behaviour on selective and intelligent approach to potentially problematic users. Thus, the user gets a certain position in the model of CRM organisation in order to business intelligence tools be able to identify each of its potential fraud or debt. Therefore, before the manufacturer marks his user as problematic, it is necessary to verify whether all user transactions are properly verified within the system, and only after verification, he can apply various forms of pressures or forced collection. When the user is guilty indeed, the manufacturer will try to solve the problem through compromise and cooperation in a way that is mutual interest, before applying these methods (Bligh P. et al.. 2004).
**CRM technology**

CRM technology provides a complete overview of user and integrates all the necessary information about him through each way of contact - whether it's traditional, based on Internet or wireless voice of user.

CRM technology integrates three main components: operational, analytical, and collaborative.

*Component of Operational CRM* enables to automate the processes of marketing, sales and services, exchange user data between different departments at manufactures and conformal daily communication with the user, as well as collection, storage, retrieval, interpretation and reporting on user data.

*Component of analytical CRM* handles a multitude data collected within operational and collaborative CRM, and based on results of processing brings, ie generates proposals of decisions concerning the form of user behaviour, and serves to personalize offer, and which helps in the planning of marketing activities. In data processing are used analytical methods that make it possible to create large-scale picture about the user and his or her needs.

*Component of collaborative CRM* enables easy going interaction between manufacturer and customer, partner and supplier. Customer sees only collaborative CRM in communication. Collaborative CRM includes many contact channels that collect information through the call center (telephone, fax), e-mail, web (Interactive Dialog / Chat Window, Forum / Chat Room, Newsgroup), conferences (Online Meeting / e Conference, Video teleconference, Voice Messaging, Video Messaging) and direct interaction with the user. His overriding goal is to improve the quality of communication with the customer which in fact means more ways of system for gathering information about user. Recently was also developed geographical CRM.

A comprehensive insight into user enables CRM software solution, Figure 1, which includes the following main integrated system components, such as: contact management and accounting, sales automation, marketing automation, customer service (and support), as well as integration with OFIS applications in the background (Doshi,2007).

At the same time under Ofis applications in the background is usually assumed ERP (Enterprise Resource Planning) system, representing business software that allows the manufacturer to automate and integrate the main business processes, share common data and access to information in real environments. CRM applications as a rule rely on basics of ERP systems.

![Fig. 1: Integrated CRM system](image)

*Source: Doshi,2007*

**Development of CRM software**
CRM applications are developed on a modular basis with a smaller or larger degree of configurability. Periods of their introduction can be measured in weeks. Price of application is relatively high, so they cannot be found for free, because their manufacturers protected them in every way. Applications require strong hardware support and expensive training, and in price of software is also included its configuration, which further engages a group of consultants, since each manufacturer is trying to adjust application to his terminology, logic and processes.

The first CRM software was created with the aim of business automation in the sales department (Sales Force Automation - SFA). Pioneer was company Siebel, once a leading manufacturer of CRM software, which now operates within Oracle group and the CRM software is called Oracle Siebel CRM.

The next step in further development of CRM was its expansion to call centers (centers for interaction with consumers). A good example is Nortel company which doesn’t exist today, and was inherited by company Clerify, now part of the company Amdocs's.

An important part of CRM represents evaluation and analysis of all data related to customer relations, which is the case of analytical softwares, for example Teradata / NRC CRM software solution.

Even the manufacturers of e-commerce solutions have improved presentation and selling their products with additional CRM functions, and examples of companies that incorporate these solutions are Intershop and BroadVision.

Manufacturers of ERP systems such as Oracle, PeopleSoft and SAP have improved their integrated systems of business applications with powerful CRM functions, and can offer to their customers integrated solutions for all aspects of business data processing.

Microsoft, in order to adjust the offer to as many business customers in the market, has divided CRM application into two parts, Sales and Customer Services, in versions Standard and Professional.

What is relevant in the development of CRM software is data transmission in the Cloud (James A. M., 2010), which have recognized software manufacturers on Figure 2.

![Fig. 2: Appearance of a page of CRM software](https://salesforce.com)

Source: Salesforce.com, 2013

**CRM software market**
From the standpoint of CRM software solutions market of software manufacturers can be divided into: CRM Point Solutions, CRM Suites and Enterprise Application Suites.

- **CRM Point Solutions**— are specialized manufacturers who make and sell applications for specific areas of activity (e.g., SFA), for specific market segments (e.g., small and medium enterprises) or specific industries. The most famous representatives are Onyx and Pivotal.

- **CRM Suites**— are manufacturers of extensive software packages for support business processes that involve contact with customers. The most famous representatives are Siebel and SugarCRM.

- **Enterprise Application Suites**— are software companies which for many years create information systems for users, and within their platform include CRM software. The most famous representatives are SAP, Oracle, PeopleSoft and Microsoft.

From the point of sales, there is an evident trend growth in sales of CRM software. Even in the peak years of global financial crisis the CRM market has continued his series of growth for the fifth year in a row. This is, in part, confirmed by data for the top five biggest manufacturers of CRM software for the period of 2006 do the 2008th, in a total amount and percentages, presented in Table 1.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP AG</td>
<td>2055</td>
<td>22.5</td>
<td>2050.8</td>
<td>25.3</td>
<td>1681.7</td>
<td>25.6</td>
</tr>
<tr>
<td>Oracle</td>
<td>1475</td>
<td>16.1</td>
<td>1,319.8</td>
<td>16.3</td>
<td>1016.8</td>
<td>15.5</td>
</tr>
<tr>
<td>Salesforce.com</td>
<td>965</td>
<td>10.6</td>
<td>676.5</td>
<td>8.3</td>
<td>451.7</td>
<td>6.9</td>
</tr>
<tr>
<td>Microsoft CRM</td>
<td>581</td>
<td>6.4</td>
<td>332.1</td>
<td>4.1</td>
<td>176.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Amdocs</td>
<td>451</td>
<td>4.9</td>
<td>421.0</td>
<td>5.2</td>
<td>365.9</td>
<td>5.6</td>
</tr>
<tr>
<td>Others</td>
<td>3620</td>
<td>39.6</td>
<td>3,289.1</td>
<td>40.6</td>
<td>2,881.6</td>
<td>43.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9147</strong></td>
<td><strong>100</strong></td>
<td><strong>8089.3</strong></td>
<td><strong>100</strong></td>
<td><strong>6573.8</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Christopher M., 2009*

### 1.4. Social Customer Relationship Management

Actual production concept is the result of further evolution of the CRM production concept into **Social Customer Relationship Management - SCRM** production concept. Behaviour of users is changing, and in response manufacturers share more information, cause they have more sources, create more content, support other users more than ever through social technology and technology of cooperation, such as Facebook, Twitter, video, review sites, blogs, community platforms, and mobile devices (SCRM, 2013).
2. Findings and Discussion

From the conducted research of production concepts of products customization was found that:

- CRM concept has evolved as an IT upgrade of concept of products customization, in particular its part related to the customization of communication of manufacturers with their users;
- CRM concept is integrated with the functions of marketing and sales;
- CRM has become an integral part of the ERP system of manufacturer.

Two decades long evolution of CRM concept have led that nowadays customization of products can be achieved on-line over the Internet, in cloud environment, as well as the link with social networks (SCRM).

Sales of CRM software, as seen at the global level, achieves constant sales growth, which unequivocally confirms appropriateness of its application.

CRM production concept widely apply business entities in developed countries to enhance their profits, and examples of its successful application are American chain of stores K-Mart, airline company Delta Airlines, Teradata Corporation, Amazon.com, General Electric, Charles Schwab, Dell Computers, IBM, Tesco etc.

Examples its unsuccessful application are much more rarely present in the production practice, but can still be found, as in the case of U.S. provider of mobile telephony AT&T Wireless.

Examples of CRM application in Serbia can be found only sporadically in available literature. In Serbia, CRM concept is wider applied in banking sector, within which banks offer their clients personalized banking services, including reporting via Internet and SMS, and all this based only on their own applications. In the sphere of production application of CRM is more than minor. The authors found only one example of introducing CRM production concept in available literature, stating that it is in proceedings implementation of SAP CRM solution in company Sintelon, but no how far it came with its application.

Conclusion

In this paper were explored production concepts of standardization, modularization, customization and CRM from the historical point of view. At the same time, a special focus is put on customization of products and CRM, as actual production concept.

Given that there is no systematized unitary view on production concept of customization of products from the standpoint of historical development in relevant literature, this work could represent a theoretical contribution in this field of research.

Research results confirmed that businesses in Serbia apply actual CRM production concept in insufficient extent. In this sense, the practical contribution of this paper is reflected in the fact that it can serve as a useful guide in the strategic management of enterprises (regardless on size of company or its program orientation), especially in the marketing sector, when adopting future strategies of company in the field of orientation on customization of products (or services).

Based on conducted research of production concepts of customization were created assumptions on the basis which it can conceptualize and practical research in the of production businesses, using which one can conceptualize practical research within the production business entities to further deepen the level of CRM applications, create new opportunities and overcome any possible limitations in applying CRM.
References


Article history:
- Received 9 September 2013
- Accepted 18 March 2014


Gender in the Facets of Corporate Social Responsibility

Vilkė Rita11, Giedrė Raišienė Agota12

Abstract

At the beginning of the twenty-first century some trend of widely discussed phenomena of corporate social responsibility (CSR) had already drifted across the gender issues, taking into account several facets of CSR. The diverse points for discussions concerned with gender and CSR might be addressed to the former debate on philanthropy and CSR. The scope of this study is recent debate on gender and CSR in terms of so called ‘big wins’ for business and society. Systematic review of scientific literature and actual evidence issued by respective research institutions was applied with the aim to organize and generalize range of gender and CSR related issues. Research results show that lately corporate social responsibility paradigm had been taken into particular trend of debate on gender issues, mainly examined in relation with gendermainstreaming and CSR reporting, so called ‘gendered organizations’ and stakeholder relations, socially responsible decision-making and corporate philanthropy. The facets of CSR had been well supported in all its essences with scientific explanations and empirical evidence minimizing the possibility of any ‘snapshot’ approaches on CSR in the fields of gender mainstreaming, CSR reporting and CSR as a political opportunity with regard to gender equality; these seems to be reasonable both for further research and adaptation to practice in the field. However later debate on gender and socially responsible decision-making suffer from quite simplified view on CSR paradigm. Corporate philanthropy viewed in isolation from the rest of CSR categories tends to create confusion in gender and CSR research; philanthropic view normally emphasizes much deeper understanding of CSR than that found in latter research.  

KEYWORDS: corporate social responsibility, gender, philanthropy

JEL: F23, J81, J82

11Kaunas University of Technology, School of Economics and Business, Centre for Social Responsibility Research, Department of Economics, e-mail: rita.vilke@ktu.lt
12Mykolas Romeris University, Faculty of Politics and Management, Institute of Management, e-mail: agotar@mruni.eu
Introduction

Corporate social responsibility (CSR) had been widely discussed in different scientific and practical discourses worldwide for more than half of a century. In its initial phase issuing the demand for social responsibilities from businessmen (Bowen, 1953) in general, at the beginning of the twenty-first century the amount of evidence increase of how some trend of CSR had already drifted across the gender issues. Lately CSR paradigm had been taken into particular debate from gender perspective, examined in relation with CSR reporting (Grosser & Moon, 2005a; 2005b; 2006; 2008; Scholz, 2012), ‘gendered organizations’ and stakeholder relations (Grosser 2009; 2011), socially responsible decision-making (Bernardi & Threadgill, 2010; Setó-Pamies, 2013) and corporate philanthropy (Catalyst..., 2011; Babcock, 2012; Testa, 2012, etc.) mainly.In stating the multidimensional nature of CSR, recently European Commission (2011) had also addressed gender issues, as one of actual labour and employment practices, which visibility and dissemination of good practices should be enhanced.

Going back to the Women's liberation movement in late sixties throughout the seventies of last century, lately gender issues start being discussed in a more focused manner in the context of CSR, sometimes giving a quite diverse character for discussions. For instance, Babcock (2012) refers to some findings by New York experts, who had stated that "companies with a significant number of women at the top are better practitioners of CSR and sustainability than other firms and are delivering big wins for business and society". Furthermore, the diverse points for discussions concerned with gender and CSR in some latterly issued points of view might be addressed to the former debate on philanthropy and CSR. At the annual Catalyst Awards Conference in March 28, 2012, Serena Fong, the director of government affairs at Catalyst, pointed out that “having more female leaders is associated with higher levels of corporate social responsibility, including philanthropy, and likely leads to higher quality CSR initiatives” (cited in Babcock, 2012). These and other similar points of view and some other latterly issued evidence from respective research organizations (e.g. Catalyst and Harvard Business School) had inspired the formulation of scientific problem for this study, namely, is there enough scientific evidence to state gender as an emerging trend in CSR research?

The aim of this study is to give an overview of recent debate on gender issues in different facets of CSR, based on theoretical encompassment. The scope of the study is recent debate on gender and CSR in terms of so called "big wins" for business and society.

Taking into account the diverse character of CSR, complement complexity of gender issues in the facets of CSR embody growing confusion in the field. Therefore, at first there is given an overview of relevant CSR theories and approaches, and based on that, gender issues are reviewed and discussed in appropriate facets of CSR. Systematic review of scientific literature and actual evidence, issued by respective research institutions, was applied with the aim to organize and generalize range of gender and CSR related issues.
Corporate social responsibility: theories and approaches

Numbers of CSR issues and cases for CSR are found nearly in all sectors of human activity encompassing actual concerns about sustainability of business, governments and NGOs. Continuously growing body of literature on CSR, which has arrived with Bowen’s book “Social Responsibilities of Businessman” (1953), and related concepts, keep demonstrating the fact, pointed out a decade ago by Garriga and Mele: “defining CSR is not as easy as it might at first appear” (2004).

Up till now from the broadest general meaning CSR is understood as of what goes beyond the law. More precisely, the general concept of CSR as a voluntary initiative had been proposed by European Commission in 2006 and has been specified lately in its new policy on CSR, issued in 2011. The latter concept define CSR as “the responsibility of enterprises for their impacts on society”, stating the way of how companies should fully meet their social responsibility, i.e. enterprises “should have in place a process to integrate social, environmental, ethical human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders” (COM(2011) 681 final).

1.1 Theories and Approaches of CSR

The CSR paradigm use to be examined through numbers of theories and approaches, which remain complex and unclear, at least until the appearance of the research, implemented by Garriga and Mele (2004). From the systematic point of view, their study greatly supported that complex situation with provided classification of the main theories of CSR and related approaches. Garriga and Mele (2004) discussed different theories with regard to CSR from the four major theoretical approaches (see Fig.1).
From the view point of Garriga and Mele (2004), in practice it is most common that each of CSR theory presents four aspects related to:

- meeting objectives that produce long-term profits,
- using business power in a responsible way,
- integrating social demands,
- contributing to a good society by doing what is ethically correct.

These aspects permitted Garriga and Mele (2004) research to classify the most relevant theories on CSR and related conceptions into four groups: instrumental, political, integrative and ethical. Scholars recognized that most of the theories considered do not make explicit the implications of each specific approach for the aspects considered in other groups of theories.

Partly different approach to the dimensions of CSR had come into research much earlier, when Archie B. Carroll (1979) suggested the four-dimensional model of CSR.
According to Carroll (1983), “corporate social responsibility involves the conduct of a business so that it is economically profitable, law abiding, ethical and socially supportive. To be socially responsible then means that profitability and obedience to the law are foremost conditions when discussing the firm’s ethics and the extent to which it supports the society in which it exists with contributions of money, time and talent”. Visser (2007), observes, that “this was the only one of countless definitions which has proliferated in the literature since the early 1950s”.

Another important observation was made by Moon (2002) stating the fact that CSR is “essentially contested”, like other broad concepts (e.g., democracy, justice). From the viewpoint of Moon (2002), “CSR is only one of several terms in currency designed to capture the practices and norms of new business-society relations. There are contending names, concepts or appellations for corporate social responsibility”. Consequently, Wisser (2007) points out, that these statements are confirmed by a survey of CSR education in Europe, which found 50 different labels for CSR modules, 40 different labels for CSR programmes and numerous CSR synonyms, the most popular of which were: business ethics, corporate citizenship, sustainability or sustainable development, corporate environmental management, business and society, business and governance, business and globalisation, and stakeholder management. The review of relevant CSR literature (e.g., Carroll, 1991; 1999; Garriga and Mele, 2004; De Bakker et al., 2005; Dahlsrud, 2006; etc.) refers to the comparable generalization with regard to numbers of definitions of CSR. According to Carroll’s (1999) investigations, the CSR definitional construct began in the 1950s, and marked the beginning of the modern era of CSR. Definitions expanded during the 1960s and proliferated during the 1970s. In the 1980s, there were fewer new definitions, more empirically based research, and alternative themes began to mature and these alternative themes included corporate social performance, stakeholder theory and business ethics theory. Caroll (1999) observes that in the 1990s, CSR continued to serve as a core construct but yielded to or was transformed into alternative thematic frameworks. Since the late 1990s, CSR had begun being coupled with strategy literature and its relationship with market outcome had been made more explicit (e.g., Kotler and Lee 2005; Porter and Kramer 2006).

Recently built on Carroll’s (1999) study, Lee (2008) traces the conceptual evolutionary path of theories on CSR, and argues that the concept of CSR went through a progressive rationalization, which is encompassed in two broad shifts in the conceptualization of CSR: the first shift is concerned with the level of analysis as researchers have gradually moved from the discussion of macro-social effects to organizational-level analysis of CSR’s effects on financial performance; and the second focuses the theoretical orientation; at the same time, scholars have shifted from explicitly normative and ethics-oriented studies to implicitly normative and performance-oriented studies.

Furthermore, the interconnection between above mentioned concepts and CSR use to be widely acknowledged in scientific literature even in the first two decades of the twenty-first century (Moon, 2002; Van Marrewijk, 2003; Garriga and Mele, 2004; De Bakker et al., 2005; Dahlsrud, 2006; Wisser, 2007; Zu, 2009; Crane et al., 2013; etc.). According to the lately developed studies, Zu (2009) observes that the concept of CSR has been progressively rationalized and became associated with much broader organizational goals such as reputation, stakeholder management and the environmental aspect of CSR, which has gained the wide support of institutional investors.
1.2 Models of CSR

Several models of CSR which had emerged in scientific literature help in clarifying the nature of gender issues in CSR. Those are addressed to socio-economic dimensions of CSR and stakeholder approach mainly. There is provided an overview of socio-economic model of CSR, two-dimensional model of CSR and four-dimensional model of CSR, which are found being supportive in mapping the gender issues in the facets of CSR further.

Socio-economic model of CSR was summarized by Zu (2009) by distinguishing two basic arguments on the social and economic dimensions of CSR. Researcher describes, that the first group represents the orthodox paradigm which maintain social responsibility of business as a single dimensional activity in which business has the only responsibility of supplying goods and services to society at a profit (Bhide and Stevenson 1990; Friedman 1968, 1970, 1989; Gaski 1985; Chamberlain 1973; cited in Zu, 2009). These classical models of CSR have a quite narrow focus of the role of business in modern society; still, such models could exist before the other ones developed. Zu (2009) advocate, that they also put much emphasis on the cost of social involvement of business and consider profit as the only criterion for judging the efficiency of business operation, thus ignoring the reality that business is a part of the larger society with a wider responsibility reaching beyond the narrow perspective of profit. On the other hand, as stated by Zu (2009), the second group of models allocate business in a social matrix contributing to the welfare of society as a whole and support the view that business is a part of the greater society and it has responsibility reaching beyond the narrow perspective of profit maximization in the short term (Steiner and Steiner 1997; Quazi 1997, 1994, 1993; Quazi and Cook 1996; Quazi and O’ Brien 1996; Samli 1992; Buchholz 1990; Ahratt and Sacks 1988; Chrisman and Carrol 1984; Carroll 1979; cited in Zu, 2009). Zu (2009) gives a prosperous summary that these models recognize the fact as in order to understand the complexity of social responsibility in modern corporate enterprise, a second dimension of contemporary views of social responsibility is urgent. This urgent need for a broader dimension is justified by rational assumption with regard to decision-making and profits. This means, as explained by Zu (2009), that managers not only make decisions that reflect their assessment of the role of the company, but they also make judgments as to whether there will be net benefits or net costs to the company associated with the exercise of social responsibility.

Quazi and O’Brien (2000) had proposed a two-dimensional model of CSR. The model has two axes which distinguish two major dimensions: first, the span of corporate responsibility, which may vary from narrow to wider perspective; and second, the range of outcomes due to the social commitments of businesses, namely encompassing cost to benefit driven perspective. More detail, the horizontal axis of the model has two extremes of responsibility: narrow (on the left side) and wide (on the right side); and vertical axis emphasize CSR in terms of long term benefits (on top) and costs (on the bottom). The narrow view of social responsibility is emphasized where business responsibility is perceived in the classical sense that of supplying goods and services which lead to profit maximization within the “rules of the game”, i.e. regulation. Therefore main emphasis here is on profit maximization in the short term. In contrast, the left extreme considers CSR in a much broader context, reaching beyond regulation to serve the wider expectations of society in areas such as environmental protection, community development, resource conservation and philanthropic giving. On the vertical axis there are two extremes represented, encompassing the perceptions to the consequences of social action of businesses range from concern with the cost of social commitment to a focus on the
benefits of social involvement: the left end emphasize concerns regarding cost of social action (the main consideration is expenditure for exercising CSR in the short term; i.e. social costs in the short term); and the right end demonstrate long term benefits from CSR (potential benefits outweigh costs for CSR in the long run). Quazi and O’Brien (2000) developed a questionnaire with twenty-five statements to measure the appropriate unit’s attitudes towards CSR, using a Likert-type scale. They had developed a four-fold distinction between different attitudes towards CSR, which are represented in four distinct quadrants (Quazi and O’Brien, 2000):

1. Classical view represents narrow view on the final aim as profit maximization; CSR activity is understood as generating net cost to the company.

2. Socio-economic view represents a narrow view of social responsibility but accepts some benefits from adopting several CSR-related activities (e.g. building good customer relationships with reduced costs; avoiding costly and embarrassing regulation, etc.)

3. Modern view normally represents kind of contemporary responsible business, which deserves good relationship with broad society (stakeholders) due to their everyday responsible activity and understands CSR as beneficial in a long run.

4. Philanthropic view emphasizes those businesses, which take part in charitable activities (mainly due to the altruistic character or ethical believes) even though this is perceived as a net cost.

Validity of the model was empirically tested in the context of two dissimilar cultures - Australia and Bangladesh. Test results confirmed the validity of the two-dimensional model of CSR in different environments, leading to the conclusion of Quazi and O’Brien (2000): CSR is two-dimensional and universal in nature; and that differing cultural and market settings in which managers operate may have little impact on the ethical perceptions of corporate managers.

One of the broadest definitions of CSR had been suggested by Carroll (1979) with several modifications (1991, 1999, 2010) as *four-dimensional CSR*, taking into account economic, legal, ethical and discretionary (philanthropic) categories of business performance. The Carroll’s pyramid of CSR (1979) represented the economic category as the base, or, as stated by Carroll, “the foundation upon which all others rest, and then built upward through legal, ethical, and philanthropic categories” (Carroll 1991: 42). It is observed that the pyramid was more of a graphical disclosure of CSR than an attempt to add new meaning to the four-domain definition. In a more pragmatic and managerial terms, Carroll summarized: “The CSR firm should strive to make a profit, obey the law, be ethical, and be a good corporate citizen” (1991: 43). Carroll made it clear that business should not fulfill these in sequential fashion; each is to be fulfilled at all times. In the same article, Carroll provided insights from CSR to stakeholder theory/management perspective by observing, that “There is a natural fit between the idea of corporate social responsibility and an organization’s stakeholders” (1991:43). He argues that the term “social” in CSR “has been seen by some as vague and lacking in specificity as to whom the corporation is responsible”. Carroll suggested that the stakeholder concept, popularized by Freeman (1984), personalizes social or societal responsibilities by outlining the specific groups or persons business should consider in its CSR orientation and activities.

Carroll’s definition had been undertaken as a comparative basis in Geva’s (2008) investigations with regard to four-dimensional CSR (referred in Zu, 2009). There exist three four-dimensional models of CSR in total: first, Carroll’s Pyramid of CSR; second, intersecting circles; and third, concentric circles. Zu (2009) finds obvious that the comparative analysis of three conceptual models shows the fact that the same terminology
represents different meanings and different approaches to CSR. He states, that Geva (2008) analyzes the difference in the conceptual structure across the three models based on the nature of CSR, the underlying boundary assumptions, the methodological tools, and the performance assessments. Therefore, there are meaningful conclusions, presented in the research.

First, the Pyramid model (Caroll 1999) is understood hierarchically, starting with economic, then legal, afterwards - ethical and finally philanthropic responsibilities. Interrelation between these domains is not discussed. Second, the concentric-circle model (Committee for Economic Development, 1971) is close to the pyramid model: economic role of business is as its core social responsibility. Intersecting circles model (Jones, 1983; Schwartz and Caroll, 2003) emphasizes the interrelationships among the different layers of CSR. However, underlying these similarities, there are essential definitional differences stated by Geva (2008): the pyramid defines the economic role in terms of narrow self-interest (“be profitable”); whereas the concentric-circle model defines this same role in terms of CSR, namely, enhancing the good of society (“he constructively profitable”). In contrast to the pyramid, which scales down the importance of the non-economic social responsibilities (i.e., legal, ethical and philanthropic), and in contrast to the intersecting circles model which, along with interrelationships, also allows for no relations among the different domains of responsibility, the concentric-circle model outlines the non-economic social responsibilities as embracing and permeating the core economic responsibilities (Geva, 2008).

At the same time Schwartz and Carroll (2003) discuss three-domain intersecting CSR constraint. The three-domain model of CSR is composed of the three responsibility areas: economic, legal, and ethical. They state, that “in general, these domain categories are defined in a manner consistent with Carroll’s four-part model, with the exception that the philanthropic category is subsumed under the ethical and/or economic domains, reflecting the possible differing motivations for philanthropic activities” (Schwartz and Carroll, 2003: 508).

The role of philanthropy in CSR constraint has been widely discussed under its sense. From the view of Geva (2008), philanthropy in the context of the pyramid of CSR can be discussed from two perspectives: inwards - as compared to other components of CSR, and outwards - as compared to other notions of CSR. Inwards, the question arises whether the philanthropic category can be correctly considered a responsibility itself. To the extent that responsibility is conceived as a normative restraint or an obligation it clearly contradicts the discretionary nature of philanthropy. Aiming to resolve this confusion, Carroll (1991) had argued that “in fact philanthropy is highly desired and prized but actually less important than the other three categories of social responsibility.” (p.229) Looking outwards, philanthropy is often regarded as the defining component of CSR. Milton Friedman’s statement that management is to make as much money as possible within the limits of the law and ethical custom embraces three components of the CSR pyramid - economic, legal, and ethical (Caroll, 1979).

Zu (2009) gives additional comments with regard to intersecting circle model (Jones 1980, 1983; Schwartz and Carroll 2003), which he finds in contrast with pyramid model in two main aspects: first, recognized possibility of interrelationships among CSR domains; and, second, rejected hierarchic order of importance. Even when the World Business Council for Sustainable Development (WBCSD) defined CSR in 1999 and 2000, the environmental dimension was not included in CSR. For example, WBCSD defined CSR as the commitment of business to contribute to sustainable economic development working with employees, their families, the local community and society at large to improve their
quality of life; in 2000 there was a slight shift in the definition: “CSR is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their family as well as the local community and society at large” (WBCSD, 2000).

**Stakeholder model of CSR** is developed under the stakeholder theory (Freeman, 1984). As stated by Zu (2009), “the conventional view of the firm depicts it as a “black box” that transforms inputs from suppliers, investors and employees into outputs for customers resulting in benefits to all providers of inputs, particularly to providers of scarce resources and skills who receive above normal “rents.” Stakeholder theorists argue that the conventional input - output model fails to take into account the complex, two-way interactions between firms and “legitimate groups.” They see the business firm as a “constellation of cooperative and competitive interests possessing intrinsic value ... with no prima facie priority of one set of interests and benefits over another” (Donaldson and Preston 1995, cited in Zu, 2009). It is found obvious, that business interacts with society in a multiple ways and company’s relationships differ with various stakeholders.

The benefits from adapting CSR to the stakeholder framework become evident when looking at the particular definition of CSR composed regarding to the specified company’s relations to stakeholder groups. However, Zu (2009) ironically emphasize this unachieved ambition for clarification as following: “Specification of CSR for each stakeholder relation has resulted in broadening of the meaning and scope of CSR. Instead of one aggregate category of social responsibility, the stakeholder framework induced creation of many new categories of CSR to reflect the wide range of stakeholder relations and interests. With the creation of more and more categories of CSR, such as environmental responsibility, diversity, affirmative action and transparent accounting practices, the meaning of CSR was expanded to account for the new categories as well as new stakeholder relations” (2009:28).

These and many other numerous attempts to clarify the meaning of CSR, normally goes to the essential summing up: there cannot and should not exist the only one generally accepted definition, conception and/or the only right model for CSR in any organization, culture, etc. However many further issues or developments in broadening conceptualization and evolving trends in CSR might benefit from the overviewed theories, approaches and models of CSR. One of these attempts are gender issues in CSR.

**Mapping Gender in the Facets of Corporate Social Responsibility**

Mapping gender in the facets of CSR with appropriate argumentation, based on above discussed theories, approaches and models of CSR, is quite challenging because of several reasons. First, there are still quite a few investigations with regard to gender and CSR in general; second, those already implemented investigations do not address any of the above discussed theories and/or models of CSR; and finally, only approaches towards CSR, presented in ongoing gender-CSR research and related debate might be addressed as a conditional conceptual basis for setting gender issues in appropriate facets of CSR. Therefore, gender issues in the facets of CSR are further discussed in relation to those most relevant theoretical assumptions of CSR by considering further contributions and limitations with regard to research of gender issues in CSR.
2.1 Gender Mainstreaming and CSR Reporting: Political Facets of CSR

Direct scientific debate on the issue of gender in relation to CSR seems to be initiated in literature by Grosser and Moon (2005a). They had investigated the potential and actual contribution of CSR to gender equality in the framework of gender mainstreaming. Grosser and Moon (2005a) introduced gender mainstreaming as combining technical systems (monitoring, reporting, evaluating) with political processes (women’s participation in decision-making) and considers the ways in which this is compatible with CSR agendas. They had examined the inclusion of gender equality criteria within three related CSR tools: human capital management reporting, CSR reporting guidelines, and socially responsible investment criteria on employee and diversity issues. Although additional evidence found by Grosser and Moon (2005b) suggests gender equality information being requested within several CSR related reporting frameworks, these requirements are mostly limited in scope, or remain optional elements. At the same time they addressed the nature and extent of relevant stakeholder opportunities to explain this unfulfilled potential.

Furthermore, Grosser and Moon (2006; 2008) moved towards the research of the extent to which external reporting by UK best practice companies includes performance information about gender equality in the workplace. They had examined the reasons for company disclosure on this issue and the barriers to better reporting and found that new and substantial forms of gender performance reporting have emerged. At the same time they state, that, however, such reporting remains idiosyncratic and largely non-comparable. They found that market, civil society and governmental drivers inform reporting practices; however firms perceive no strong demand for, and significant risks associated with more detailed reporting. They had considered policy options beyond regulation.

Remarkable concerns had been issued by Scholz (2012) with regard to troubling practices in CSR reporting: “while more and more companies file CSR reports each year, the lack of transparency into workplace gender equality remains”. She states, that “today, women outperform men academically and increasingly enter the workforce, but do not reach corresponding leadership positions. Many governments have stepped in to shatter the glass ceiling through regulation: Norway requires 40 percent of directors be female; France has a 20 percent female requirement for public boards in 2014, increasing to 40 percent by 2017; while in the U.S., public companies must disclose whether and how their nomination committees considers diversity in selecting directors”. Scholz (2012) gives an overview, how the presence of qualified and experienced women in corporate governance results in better board practices from increased shareholder accountability to better legal compliance and even stronger financial performance. Therefore, she proposes that “closing the gender gap in management and governance positions actually correlates to stronger productivity on both corporate and national levels <…>. Including gender in CSR reports allows tracking of gender equality progress by company, industry and nation. However, an important hurdle to analyzing gender equality in the corporate world is the lack of consistent definitions and the lack of companies including gender in their reports” (Scholz, 2012). There are additional reporting problems observed with regard to Global Reporting Initiative, which is normally addressed, to some extent, as public CSR reporting tool. Global Reporting Institute included gender-related indicators in GRI (previously G3, currently G4) reporting guidelines. However most of findings observe and stress the same problem: gender data, initiatives in career development, equal pay and employment remain unreported by many companies. Therefore, as stated by Scholz (2012), there are limited possibilities to track changes and trends and monitor the progress of gender equality and development, despite the fact that GRI provides guidelines for companies to start tracking and reporting their gender-related initiatives.
Going back to the previous discussions on theories and approaches towards CSR, those gender mainstreaming as combining technical systems (monitoring, reporting, evaluating) with political processes (women’s participation in decision-making) issues mainly refers to the instrumental as well as political facets of CSR. Despite the quite visible reference towards political processes (reference to Political theories of CSR, see Fig.1), gender mainstreaming and CSR reporting nearly refers to the instrumental theories (see Fig.1) due to the emphasized focus on the strategic goal of achieving competitive advantages, which would produce long-term benefits, as stated by Garriga and Mele (2004: 53). We find this emphasis in the above discussed research.

2.2 Gendered Organizations, Stakeholder Relations and CSR

From the point of view, proposed by European Commission (2011), Grosser’s (2009) findings demonstrate how progress on gender equality in the field of CSR might contribute to broader European Union gender and sustainability objectives. She focused on corporations and citizenship (Political theories of CSR – Corporate citizenship, see Fig.1), and on company stakeholder relations (Integrative theories – Stakeholder management, see Fig.1) in particular. While the literature on stakeholder relations has previously engaged with scholarship on feminist ethics, and in particular the ‘ethics of care’, her research draws upon the feminist citizenship and feminist ethics literature, and upon gender mainstreaming strategy suggests a more comprehensive approach to gender equality within stakeholder relations. Therefore Grosser (2009) aimed at extending the understanding of CSR as a potential policy instrument to advance gender equality, which are nearly echoed in the EU new policy on CSR.

Later Grosser’s investigations (2011) focused on systematic engagement with ‘gendered organizations’ studies, and with a broad range of CSR theory, in particular that related to governance. Thus was opened up a new dialogue between the fields of ‘gendered organizations’ studies and CSR. Grosser (2011) investigated the possible contribution of CSR to organizational change with regard to gender equality and afterwards employed these in an exploration of CSR practice, focusing on CSR reporting and stakeholder relations. She identified several ways in which CSR might contribute to advancing the feminist organizational change agenda. Particular attention in her investigations is paid to recent developments in political theories of CSR (see Fig.1), which regard CSR as a governance process involving business, government and civil society. Thus, Grosser (2011) addressed organizational change and gender equality in the context of new governance, and particularly CSR, and by extending the literature both empirically and conceptually, produced insights for feminist studies relating to CSR theory and practice.

Grosser’s (2011) research suggests that “despite its limitations, CSR can contribute to the gender organizational change agenda in several ways, which revolve around the new governance systems which CSR presages. These include new organizational rhetoric and practices, new external drivers of change within business, and new kinds of regulation” (2011:ii). Finally, there is argumentation provided for framing CSR as a political opportunity with regard to gender equality. It should be stated, that Grosser’s (2009; 2011) views are highly supported with scientific discussions as well as empirical evidence in the discussed political facets of CSR.
2.3 Gender Impact on Socially Responsible Decision-Making

Lately the relationship between women directors and CSR was analyzed by Bernardi and Threadgill (2010) and Setó-Pamies (2013) in the facet of socially responsible decision-making.

Bernardi et al. (2009; 2006, cited in Bernardi and Threadgill, 2010) note that boards with a higher percentage of women were significantly more likely to appear on Fortune’s “Best companies to work for” (2006) and Ethisphere’s “Most ethical companies” list (close to Instrumental theories – Cause-related marketing, See fig.1). At the same time a ‘snapshot’ views of corporate social responsibility (i.e., only considering a one year timeframe) were stated as major limitations of these studies.

Bernardi and Threadgill (2010) decided to proceed a longitudinal evaluation for a more precise measure of corporation’s sustained commitment to its social responsibilities (Ethical theories, see Fig.1). They examined whether the increased female representation on corporate boards translates to measurable outcomes in the area of corporate social responsibility over a three-year period of time. More precisely, Bernardi and Threadgill (2010) took a sample of Fortune 500 companies and assessed whether or not gender had a tangible effect on organization’s decisions by engaging in activities that evidence corporate social responsibility. Bernardi and Threadgill (2010) set the initial point of research from general assumption, i.e. diversity of people generates a diverse set of opinions that impacts and improves the decision-making process. Their expectation was that gender diversity will increase socially responsible behaviour by a corporation.

Social responsibility was understood in the research after McGuire’s (1963) definition: “social responsibility as an obligation to society that extends beyond a company’s economic and legal responsibilities” (cited in Bernardi & Threadgill, 2010). Dependent variables of corporate social responsibility examined the level of corporate awareness demonstrated by a commitment to: (1) employees, (2) community involvement, (3) monetary contributions, and (4) environmental consciousness (Integrative and Ethical theories, see Fig.1). Scholars found their results being confirmatory: an association was found between the number of female directors on a corporate board and the incidence of corporate social behaviour including, i.e. charitable giving, community involvement, and outside recognition of employee benefits.

Setó-Pamies (2013) had analysed the implications that gender diversity has on CSR by carrying out an empirical study of a sample of firms from a variety of countries and sectors. Researcher also aimed at determining whether those firms with a higher percentage of women on the board of directors are more socially responsible as similar to the research of Bernardi and Threadgill (2010). Setó-Pamies (2013) also found that the results supported the hypothesis on gender diversity’s positive influence upon CSR: female talent played a strategic role in enabling firms to manage their social responsibility and sustainable practices appropriately.

The overviewed investigations encompassed socially responsible decision-making close to issues referred in Integrative and Ethical theories of CSR (see Fig.1). Commitment to employees mostly refers to Issues management, whereas community involvement mostly adhere Stakeholder management and Corporate social performance issues in the facets of Integrative theories of CSR. Moreover, monetary contributions go straightforward to Philanthropic responsibilities in four-dimensional CSR. Environmental consciousness refers to Ethical theories, i.e. Sustainable development approach (see Fig.1).
2.4 Gender and Corporate Philanthropy in Four-Dimensional CSR

Recently new data had been gathered by joint research of Catalyst and researchers from Harvard Business School (2011). It was examined how corporate leadership and organizational structure influence CSR, by utilizing, so called in the research, ‘the most visible form of CSR’ in the United States, i.e. corporate philanthropy. Research suggests that, examined through the lens of corporate philanthropy, gender-inclusive leadership and CSR are linked. The main findings demonstrate several major trends. It was found, that companies with gender-inclusive leadership teams, compared to companies without women executive leaders, contributed, on average, more charitable funds. Indeed, there is given an explanation, that “it’s not only a matter of companies with more women leaders being larger and having more money to donate or of companies with more women being clustered in industries with higher levels of charitable giving” (Catalyst…, 2011:2).

Furthermore, the key factors that might influence total donations were controlled. It was found that “the presence of women leaders in Fortune 500 companies still has a significant, positive effect: more women leaders is correlated with higher levels of philanthropy” (Catalyst…, 2011:2). Hence, the report gives facts of those companies with 25 percent or more women corporate officers as of 2007 made annual contributions that were 13 times higher than those made by companies with no women corporate officers. By collecting additional evidence, it was found that gender-inclusive leadership has positive impact on CSR in general. In line with increased philanthropy, increases in other CSR areas, e.g. environmental CSR, was observed.

Testa (2012) gives a broader review, suggesting how “increased representation of women on boards appears to strengthen corporate social responsibility records, improve integration into the communities where the companies operate, and put a stronger focus on long-term sustainability issues”. She gives some excerpts with facts from several recent studies. For instance, “2020 Women on Boards” is a national campaign to First Affirmative Financial Network increase the percentage of women on U.S. company boards to 20 percent or greater by the year 2020. On January 20, „Women on Boards“launched a database, the „2020 Gender Diversity Directory“, which evaluates companies by the percentage of women on their boards. This is recognized as a valuable tool for investors to evaluate a company's diversity profile. „Women Corporate Directors“ (WCD) is a national membership organization supporting women board members, sponsors a “Call to Action” program advocating board diversity and excellence in corporate governance.

Moreover, research by Catalyst (2011) propose, that gender-inclusive leadership likely affects either the level or quantity of philanthropic investment corporations make in CSR, and quality of CSR initiatives. However, the meaning of “quality of CSR initiatives” remains relatively negotiable, as proposed examples does not refer to any features or criteria for defining ‘qualitative’ CSR initiatives. In summing up, the general proposition given in the research points out that “gender-inclusive leadership is good for business and society” (Catalyst…, 2011:3).

From the very first insight on the reviewed findings, it might seem that corporate philanthropy, addressed in latter research with regard to gender and CSR, had been taken into account as simply a ‘snapshot’ view as of that one category of CSR. Moreover, Carroll (1999) made it clear that business should not fulfill some of economic, legal, ethical and discretionary (philanthropic) categories in sequential fashion; each is to be fulfilled at all times (Carroll, 1999).
Discussion and conclusions

Gender in the facets of CSR with appropriate argumentation, based on theories, approaches and models of CSR, is found rather challenging. First, there are still quite a few investigations with regard to gender and CSR in general. Second, those already implemented investigations do not address any of the above discussed theories and/or models of CSR. And finally, only approaches towards CSR, presented in ongoing gender-CSR research and related debate might be addressed as a conditional conceptual basis for setting gender issues in appropriate facets of CSR.

However, the reviewed landscape of scientific debate and actual evidence, gathered by respective scholars and research institutions through recent empirical investigations, tends to suggest enough scientific evidence for stating gender as an emerging trend in CSR research and there are particular reasons for stating that.

First of all, the debate on gender and CSR had been awakened by previously well known respective scholars in the field of CSR. Thus the facets of CSR had been well supported in all its essences with scientific explanations and empirical evidence minimizing the possibility of any ‘snapshot’ approaches on CSR in the fields of gender mainstreaming, CSR reporting and CSR as a political opportunity with regard to gender equality; these seems to be reasonable both for further research and adaptation to practice in the field. Especially much promising are those produced insights for feminist studies relating to CSR theory and practice, mainly due to the contemporary challenges for organizational change.

However later debate on gender and socially responsible decision-making seems to suffer from quite simplified view on CSR paradigm, despite the ambitions for a more precise measure of sustained commitment to social responsibilities. Those four activities taken into account as measurable evidence for CSR (i.e. commitment to employees, community involvement, monetary contributions, and environmental consciousness) seem to be rather notional and might mistakenly lead to nonexistent relation between gender issues and actual facets of CSR. Empowering both scientific and empirical evidence in this facet might greatly benefit from, e.g. using triangulation approach or additional combination of several different research techniques.

And finally, it might be argued, that corporate philanthropy viewed in isolation from the rest of CSR categories tends to create confusion in gender and CSR research. Philanthropic responsibilities emphasize much deeper understanding of CSR than that examined in latter research. In the case for CSR, business agrees to participate in charitable activities even though this is perceived as a net cost and this impetus may come from a more altruistic or ethical sensitiveness to do some good for society; and this is a major condition to be fulfilled for taking into account philanthropy as part of CSR. It is equally important to keep in mind that CSR is not just philanthropy, as it was commonly understood for a long period of time (hence, up till now!) in wide society. Here is an emphasis on how organizations do their daily work in treating their employees, producing goods or supplying services, marketing them, etc. In other words, CSR is not so much concerned of what business do with their profit, but much more of how they make that profit.

Furthermore, it is time to go further than merely recognizing the value women (as well as men) provide in corporate governance in terms of decision-making or philanthropy. The twenty-first century calls for taking down the glass ceiling, close the gender gap and realize those thoughtful benefits of gender equality to the private and public sectors in much broader than that of socially responsible decision-making and philanthropic sense of CSR.
References


Article history:
- Received 23 May 2014
- Accepted 30 June 2014
Social change and women entrepreneurship in Algeria

Boufeldja Ghiat

Abstract

Algerian women had a culture of staying at home, but with the beginning of this century, the Algerian women are holding positions of responsibility. Many of them chose to be entrepreneurs, which demonstrate that the country is living profound social and cultural changes.

The current environment in Algeria promotes access to education and training for girls, but the socio-cultural environment remains for women a difficult obstacle to overcome. Few years ago, to see women as entrepreneurs was inconceivable in a male and conservative society.

Despite the improving economy, Algeria is experiencing a high rate of unemployment, including amongst young graduates. This motivated the state to adopt a policy of youth employment, by granting them financial facilities, in order to create their own businesses. These factors have encouraged graduated women to venture into entrepreneurship businesses.

22 female entrepreneurs were interviewed and the impact of social, cultural changes and attitudes in Algerian society were explored.

The results from this study showed that the Algerian society is undergoing big socio-cultural changes and women entrepreneurs became a usual matter in Algeria. In spite of this facts, the majority of them complain of socio-cultural constraints.

The purpose of this paper is to study the socio-cultural changes and constraints of women entrepreneurs in Algeria. It high light also the supports receive by them from their families, to confront the constraints of a male society.

KEYWORDS: women entrepreneurship, socio-cultural change, gender and work

JEL: J16, L26

---

13Faculty of social sciences, Oran University, Algeria,

e-mail: ghiat_boufelja@yahoo.fr
1. Social change and women entrepreneurship in Algeria

After her independence, Algeria inherited a devastated economy, low structures of education and training, as well as the spread of illiteracy and poverty. This led to a backward socio-cultural situation, including the position and role of women in society.

Algeria experienced during the sixties of the 20th century, major changes in political, economic and in the socio-cultural environments. She went through a period of socialism (1962-1988), and then the opening of the market economy as a result of globalization.

The changes have affected methods of work and working culture, especially the work of the women who went from working at home, to working agriculture in farms, to the craftsmanship, to working in managerial positions, to entrepreneurship and holding political responsibilities.

After a period of economic expansion which lasted until the 70s of the 20th century, Algeria has experienced a period of crisis, following the drop in oil prices - the only important resource revenues in foreign currency - and the state was forced to borrow from the World Bank who asked unpopular conditions. This has led to the privatization and closure of several state companies, as well as the dismissal of thousands of workers.

Driven by the huge deficit in job in Algeria and influenced by the success of entrepreneurship strategy in Europe and the United States, Algeria embarked on a strategy to encourage young people to start their own businesses, and participate in the creation of jobs and wealth.

A strategy of entrepreneurship started in late '80s, thanks to liberal economic reforms, entrepreneurship emerged and grew, i.e. 91% of existing enterprises in 2005 were created after 1990 (Hammouda, Lassassi, 2007) and since, the number of companies continues to increase. "At the end of 2008, the number of private SMEs amounted to 392,013 and more than 126,887 artisans. Indeed, the entrepreneurship became the cornerstone of economic development" (Berreziga, Meziane, 2012, p. 1).

Entrepreneurship has become a strategy for youth employment and socio-economic development. "Small business is poised to acquire a dual legitimacy. Social Firstly, it has related to the factors of self-realization and social integration. And economic, as TPE / PME have been in recent years spearheaded producing innovations, development of new services and creating jobs" (Tunes, 2003, p. 13).

Enterprises managed by young women are generally micro or small, with simple means of production in general, so we registered the absence of pressure for technological change. But the fact that these companies activate in an underdeveloped environment puts them under strong socio-cultural pressures.

The objectives of this study are to illuminate the economic and societal changes and their impacts the socio-cultural environment, which led to females entrepreneurship activities in Algeria.
2. Education and social change

In Algeria, as a developing country, the woman remained in the background in the social and economic life. Salman Al-Abboudi has reported that "in Morocco, women have long been a back plant by traditions and customs value of man in relation to the position of woman and confirmed their superiority over them" (Salman Al Abboudi, 2012, p.1). This applies to the Algerian woman since the two countries share the same socio-cultural values, and belonging to the Muslim civilization.

With social, economic and educational development, the status of women has clearly improved, which has allowed the girls to engage in higher education, and move more towards professional activities. As a result of the economic crisis, the deficit work places and the failure of the government to create more jobs. State structures for youth employment have been created to encourage them to create their own businesses.

3. Women entrepreneurship in Algeria

Algerian society has undergone major social changes, which have accelerated since the eighties of the twentieth century. Algerian legislation regarding education and work, do not discriminate between the sexes. As mentioned by Nouara Ja'far, former Associate Minister for the Family: "On the one hand, there is the law that puts men and women on an equal footing. But on the other hand, the disparity between the sexes is still raging on the ground. In fact, it's a problem of mentality "(Belkhiri, 2012).
The fact that the majority of the Algerian university students are female gender, we find that women tend strongly to professional activities.

Despite her entry to entrepreneurial activities, the Algerian women remain attached to their families and socio-cultural values, that often hinder the success and growth of their businesses (Tounés, Assala, 2007).

![Diagram](image)

**Fig.2: Change and development of entrepreneurial behaviour**

The choice of Algerian women of entrepreneurship as a job is the result of several changes, political, educational and economic.

1. Political changes: Algeria has opted for socialism after her independence, and after the events of October 1988, it opened on multiparty system, which gave more democracy, and on liberal economy which has affected the political, social and economic life environment. The important companies were public ant state owned, and private initiatives to create enterprises were not allowed. After that event, and with the political changes, the private initiatives became encouraged.

2. Educational change: Algeria has invested heavily in education, vocational training and higher education. The educational factors had a significant impact on the societal level of instruction, including girls graduating from Algerian universities. This is due to the education policy which has become a requirement and compulsory for all Algerian children without discrimination between genders. This had an impact on the development of training and training needed for the Algerian economy. He girls were found keener for the study, and nowadays most university students are girls, in most fields of study, even those traditionally known as male technical specialties.

3. Economic changes: The availability of financial resources from the hydrocarbon export revenues, and the openness to the market economy encouraged the investment in social and economic infrastructures. Algeria invested heavily in different industrial sectors,
such as the petrochemical, mechanical and food industries, in order to meet their consummation needs and to reduce imports.

These changes had an impact on the socio-cultural life, attitudes and behaviours of youngs from the two genres, as workers, managers and entrepreneurs, as well as their attitudes towards the work of women in Algeria.

Female entrepreneurship has become obvious, and the engagement in dynamic socio-cultural changes. That is used as a means for gaining more power in their battle for empowerment, in seeking equality between genders in Algeria society.

The economic, educative development of Algeria, as well as the development of the communication technology led to major social changes in culture and attitudes towards the work of women in Algerian society.

In spite of accepting the work of women in different rectors and economical, social and political activities, women are still facing cultural constraints while carrying out their occupational duties even as managers and entrepreneurs.

4. Problematic

Although entrepreneurship is an economic activity open to both sexes, the majority of entrepreneurs are male. Entrepreneurship was related to public works and building, that requires physical force. Consequently, women were not attracted by entrepreneurship professions. The democratization of education and its orientation of women towards scientific and technological fields of study have pushed them to be more and more interested by jobs related to their trainings and scientific backgrounds.

As result of encouraging youth by the state towards entrepreneurship, women became interest in this profession, traditionally reserved for men. If men in a society of males’ culture, meet insurmountable difficulties during the process of creating and managing businesses, the case is more complex for women in a traditional and hostile environment.

The social changes, cultures and attitudes towards women creating their enterprises and managing them, and supervising men in a male society, are aspects that need to be highlighted.

5. Hypothesis

From the stated problematic, the following hypothesis were put in order to guide our practical research.

1. Algerian society is going through major cultural changes.
2. The educational level of women entrepreneurs is higher than male entrepreneurs.
3. The desire of women to have more power and freedom, are behind the choice of entrepreneurship professions.
4. Women entrepreneurs feel their status improved because of being entrepreneurs.
5. The success of women entrepreneurs in Algeria requires changing attitudes
6. Methodology

In order to get data about the impact changes on women entrepreneurship in Algeria, qualitative methods through interviews and quantitative methods through questionnaires were used to collect data about social and cultural changes, and their impacts on managerial practices of women entrepreneurs in Algeria.

7. Data collection

A questionnaire was developed and filled in by 22 women entrepreneurs, in order to answer questions about their profiles, their enterprises and their socio-cultural constraints. The following points were explored:

- The educational level of women entrepreneurs.
- Economic activity of parents.
- The motive behind the choice of entrepreneurial business.
- The social perception of the woman entrepreneur.
- The societal acceptability of women as owner and managers of enterprises.
- The feeling of autonomy and independence of women entrepreneurs.

8. Results

The data from a sample of 22 women entrepreneurs was analysed, and helped to draw the following conclusions:

8.1. Population

22 questionnaires were filled by women entrepreneurs in the region of Oran. 12 of them are married with children, and 14 of them have a university degree.

8.1.1. Personal Information

<table>
<thead>
<tr>
<th>Level of instruction</th>
<th>Med. school</th>
<th>Secondary</th>
<th>university</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01</td>
<td>07</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>%</td>
<td>4.54 %</td>
<td>31.81 %</td>
<td>63.00 %</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Following Table 1, the majority of women entrepreneurs (63%) have a university degree.
Table 2: Marital status and ages of the sample:

<table>
<thead>
<tr>
<th>Age</th>
<th>Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single</td>
</tr>
<tr>
<td>20 - 30</td>
<td>04</td>
</tr>
<tr>
<td>31 - 40</td>
<td>04</td>
</tr>
<tr>
<td>41 - 50</td>
<td>01</td>
</tr>
<tr>
<td>51 and more</td>
<td>00</td>
</tr>
<tr>
<td>Total</td>
<td>09</td>
</tr>
</tbody>
</table>

The majority members of the sample, as indicated in Table 2, are between 20 and 40 years; and 54.54% of them are married.

8.1.2. Information about the enterprise

Table 3: Main motivation behind the choice of professional activity:

<table>
<thead>
<tr>
<th>1</th>
<th>Reason for choice of the activity</th>
<th>H.craft</th>
<th>Service</th>
<th>Indust</th>
<th>Pub.eng</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The activity of a family member</td>
<td>02</td>
<td>04</td>
<td>02</td>
<td>00</td>
<td>08</td>
</tr>
<tr>
<td>3</td>
<td>Personal tendencies</td>
<td>01</td>
<td>03</td>
<td>01</td>
<td>01</td>
<td>06</td>
</tr>
<tr>
<td>4</td>
<td>The field of study</td>
<td>00</td>
<td>04</td>
<td>00</td>
<td>01</td>
<td>05</td>
</tr>
<tr>
<td>5</td>
<td>Activity of husband</td>
<td>00</td>
<td>00</td>
<td>01</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td>6</td>
<td>Field for profit</td>
<td>00</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>01</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>03</td>
<td>11</td>
<td>05</td>
<td>03</td>
<td>22</td>
</tr>
</tbody>
</table>

The majority of enterprises in the sample (Table 3) are in services, followed by industry.

Table 4: Lifetime of the enterprise:

<table>
<thead>
<tr>
<th>Years in Business</th>
<th>2-9</th>
<th>10-19</th>
<th>20 – 29</th>
<th>More/30</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 5 years</td>
<td>05</td>
<td>05</td>
<td>01</td>
<td>00</td>
<td>11</td>
</tr>
<tr>
<td>5 -10</td>
<td>03</td>
<td>01</td>
<td>00</td>
<td>01</td>
<td>05</td>
</tr>
<tr>
<td>11-15</td>
<td>01</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>02</td>
</tr>
<tr>
<td>More than 15 years</td>
<td>03</td>
<td>00</td>
<td>00</td>
<td>01</td>
<td>04</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>06</td>
<td>02</td>
<td>02</td>
<td>22</td>
</tr>
</tbody>
</table>

The majority of businesses concerned by the study are small, newly created (under 5 years) and with a number of workers between (2 and 9) workers.
Table 5: The socio-cultural constraints of women entrepreneurs in Algeria.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Oui</th>
<th>%</th>
<th>Non</th>
<th>%</th>
<th>Parfois</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My employees are receptive to my instructions.</td>
<td>16</td>
<td>72.72</td>
<td>02</td>
<td>09.09</td>
<td>04</td>
<td>18.18</td>
</tr>
<tr>
<td>2</td>
<td>I have no difficulty communicating with men subordinates.</td>
<td>15</td>
<td>68.18</td>
<td>01</td>
<td>04.54</td>
<td>06</td>
<td>27.27</td>
</tr>
<tr>
<td>3</td>
<td>My status has improved with respect to the society after creating my business.</td>
<td>15</td>
<td>68.18</td>
<td>04</td>
<td>18.18</td>
<td>03</td>
<td>13.63</td>
</tr>
<tr>
<td>4</td>
<td>My success is not due to the fact that I am a woman.</td>
<td>14</td>
<td>63.63</td>
<td>06</td>
<td>27.27</td>
<td>02</td>
<td>09.09</td>
</tr>
<tr>
<td>5</td>
<td>To have successful women entrepreneurship requires radical change of attitudes.</td>
<td>12</td>
<td>54.54</td>
<td>07</td>
<td>31.81</td>
<td>03</td>
<td>13.63</td>
</tr>
<tr>
<td>6</td>
<td>Men workers accept easily to be managed by a woman.</td>
<td>12</td>
<td>54.54</td>
<td>04</td>
<td>18.18</td>
<td>06</td>
<td>27.27</td>
</tr>
<tr>
<td>7</td>
<td>There is a competition between women entrepreneurs.</td>
<td>11</td>
<td>50.00</td>
<td>03</td>
<td>13.63</td>
<td>08</td>
<td>36.36</td>
</tr>
<tr>
<td>8</td>
<td>Harassment of men does not bother me.</td>
<td>11</td>
<td>50.00</td>
<td>05</td>
<td>22.72</td>
<td>07</td>
<td>31.81</td>
</tr>
<tr>
<td>9</td>
<td>There is a jealousy between women entrepreneurs.</td>
<td>11</td>
<td>50.00</td>
<td>03</td>
<td>13.63</td>
<td>08</td>
<td>36.36</td>
</tr>
<tr>
<td>10</td>
<td>My competitors are jealous of me, because I am a successful woman.</td>
<td>11</td>
<td>50.00</td>
<td>07</td>
<td>31.81</td>
<td>04</td>
<td>18.18</td>
</tr>
<tr>
<td>11</td>
<td>The fact that I am a woman does not pose any problems for my business.</td>
<td>10</td>
<td>45.45</td>
<td>04</td>
<td>18.18</td>
<td>08</td>
<td>36.36</td>
</tr>
<tr>
<td>12</td>
<td>I have difficulties in communicating with my women subordinates.</td>
<td>10</td>
<td>45.45</td>
<td>10</td>
<td>45.45</td>
<td>02</td>
<td>09.09</td>
</tr>
<tr>
<td>13</td>
<td>The perception of male entrepreneurs about women entrepreneurs is significantly negative.</td>
<td>09</td>
<td>40.90</td>
<td>06</td>
<td>27.27</td>
<td>07</td>
<td>31.81</td>
</tr>
<tr>
<td>14</td>
<td>There is a cooperation between women entrepreneurs.</td>
<td>09</td>
<td>40.90</td>
<td>07</td>
<td>31.81</td>
<td>06</td>
<td>27.27</td>
</tr>
<tr>
<td>15</td>
<td>The Algerian society perceives positively the position of woman as entrepreneurs.</td>
<td>08</td>
<td>36.36</td>
<td>07</td>
<td>31.81</td>
<td>07</td>
<td>31.81</td>
</tr>
<tr>
<td>16</td>
<td>I prefer to deal with women entrepreneurs.</td>
<td>07</td>
<td>31.81</td>
<td>08</td>
<td>36.36</td>
<td>07</td>
<td>31.81</td>
</tr>
</tbody>
</table>

The results on table 6, showed the impacts of traditional culture on the managerial behaviour of women entrepreneurs.
9. Discussions

Despite the growing number of women entrepreneurs in Algeria, there is a lack of field researches in this aspect. The following discussion presents the results in relation to the observations of everyday life, and responses from interviews with women entrepreneurs. These results are compared with other research in the Maghreb and the Arab-Muslim countries in general (Rachdi, 2006 Kilani, 1998).

The majority of women entrepreneurs have a college degree. Their instruction levels are higher than that of their parents. This explains why changes experienced by the Algerian society.

To a question about the motivation behind the choice of entrepreneurship business, the majority of women responded that they tend to have more power and freedom, and more consideration in society. They feel their status improved socially because they became entrepreneurs.

Despite the socio-cultural development of Algerian society, much of the Algerians resist, and do not accept to see women as entrepreneurs, which makes it more difficult to manage men. Despite their success in managing their enterprises, most women entrepreneurs expressed the need for a change in mentality for the success of female entrepreneurship.

Despite the social change that took place during the last few decades, the majority of women entrepreneurs face socio-cultural constraints from their environments.

The major problems of women entrepreneurs come from the attitudes of employees within their own enterprises and the socio-cultural environment. These cultural issues are related to many aspects of day to day life, as well as the human relations and managerial practices, as shown in Table 5.

Regarding the perception of the women entrepreneur by the society, 15 women stated that their status was improved after the creation of their own businesses, but only 8 responses found that the society regarded positively the position of the women entrepreneurs.

Among the socio-cultural issues, there is a high level of communication between genders. 15 responses indicated that they found no difficulty in communicating with their men subordinates. To another question, 10 women entrepreneurs responded that they had problems in communicating with their women subordinates.

Regarding the fact of being managed by a woman, 12 responses (54.54%), have shown that employees accept to be supervised by women, and the majority of women entrepreneurs (16), responded that employees were receptive to their directives. It is obvious that subordinates in enterprises managed by women to accept this fact, because those who do not accept refuse to work in these enterprises, and choose to work with men entrepreneurs.

Among the cultural factors that influence the behaviour of women entrepreneurs, we find competition, cooperation and jealousy. Half of the women entrepreneurs (50.00%) found that there was a competition between women entrepreneurs. On another question, 50% found that their competitors were jealous of them. The same number of entrepreneurs (11) found that there was a jealousy between women entrepreneurs.

In response to the question concerning the cooperation between women entrepreneurs (49.90 %) responded that there was cooperation, and (31.81% answered no to this question.
Asked "if they prefer to deal with women entrepreneurs' 07 of them, that was (31.81%) answered yes, and (36.36%) prefer not to deal with women entrepreneurs.

Regarding cooperation between men and women entrepreneurs, 9 responses (40.90%) found that the perception of men towards women entrepreneurs was significantly negative, and (50.00%) found that they were not disturbed by men’s harassment.

To a question, whether their success is due to being women, the majority of women entrepreneurs (63.63%) responded that they did not think, that being a woman has an impact on their professional accomplishments; and (45.45%) responded that they did not see their problems at work, were due to the facts that they are women.

Finally, 11 women (50.00%) consider that the success of women entrepreneurs requires a radical change in the attitudes of people in Algerian society. Different responses show that women entrepreneurs face socio-cultural constraints, as a result to attitudes, behaviours and practices of people in a male society.

Women entrepreneurs in Algeria and in the Maghreb in general, are related to their culture, and cannot be dissociated from their Arab-Muslim identity. If the working conditions of Algerian women have changed dramatically, "the attitudes and perceptions of society have not sufficiently evolved" (Salman et al., 2012, p3).

Female entrepreneurship is not just an economic activity, employment or a way out of unemployment crisis, but a means of emancipation of women, expanding their power and freedom. Female entrepreneurship is helping to change men/women relationships and the revolt of the latter against the traditional culture of submission in a male society. But that does not happen without social resistance, especially from men, defending their advantages, relying on moral and traditional values of the society.

Conclusions

Despite the efforts of the state in the field of training and media areas, and despite the changes and socio-cultural developments experienced by Algerian society, changes in attitudes require more time and effort to raise awareness about a new culture of genres.

Few field studies were conducted in Algeria to study the socio-cultural change and its impact on the attitudes and behaviours of women entrepreneurs in a traditional Arab-Muslim male environment. There is a lack of literature that focuses on the role of female entrepreneurship in the expansion of freedom, power and empowerment of women. This study contributes to bridge the scientific gap in women's entrepreneurship in the Arab countries in general and in Algeria in particular.
References


Article history:

• Received 25 March 2014
• Accepted 30 April 2014
RURAL WOMEN AND FOOD SECURITY IN MYMENSINGH DISTRICT

Shajahan Kabir Mohammad¹⁴, Beslać Milan¹⁵, Grozdanić Radmila¹⁶

Abstract

The study was undertaken to determine the key factors relevant to rural women enhancing food security which have great contribution to food security in their family and community. A sample size of 80 women was drawn from Char Ishawrdia village of Mymensingh sadar upazila. This finding showed that most of the respondents constituted economically active but were not well educated. It was found that the yearly average income and expenditure of the households were Tk.66656.25 and Tk.67238.75 respectively. It was also found that yearly average income of the respondents was only Tk.7600.00. Rural women of the study area were involved in harvesting crops, crop production, livestock rearing, homestead forestry and gardening, post-harvest operation, cooking, cleaning house, washing cloth and caring children. There were some factors relevant to rural women affecting food security. In functional analysis, the Log Linear model was fitted best. In this model, the household food security was significantly influenced by education of respondent, family size, household income, access to credit, and social participation. From the study it was found that women were highly empowered in study area and empowered women had great contribution to ensure the household food security. By the process of empowering women, now respondents have a chance to increase their income, to participate in decision making process, to build up their health and nutritional knowledge, control over capital and participate in social and political activities through which they can easily ensure food security. Findings of the study suggest that government should provide different types of facilities to rural women which will help those women to ensure household food security. Government should also take attempts to change the social attitudes towards the rural women.

KEYWORDS: rural women, food security

JEL: Q18

¹⁴ Agricultural University, Mymensingh, Bangladesh, e-mail: mskabir786@gmail.com
¹⁵ Faculty for Business Economy and Entrepreneurship, Belgrade, Serbia, e-mail: milan.beslac@galeb.com
¹⁶ Faculty for Business Economy and Entrepreneurship, Belgrade, Serbia, e-mail: sme_rada@hotmail.com
Background of the Study

In Bangladesh, women constitute about half of the total population of which 80 percent live in rural areas (BBS, 2006). But their status has been ranked the lowest in the world on the basis of twenty indicators related to health, marriage, children, education, employment and social equality. The World Bank study in Bangladesh highlights that women have limited role in household decision-making, limited access and control over household resources (physical and financial assets), low level of individual assets, heavy domestic workloads, restricted mobility and inadequate knowledge and skills that leading to women’s vulnerability (Sebstad, Cohen 2002: 44).

Rural women play a critical role in agricultural production and in the rural economies of developing countries. In the developing world as a whole, agriculture accounted for about 63 percent of total female employment in 1997 and it is still the most important sector for female employment in sub-Saharan Africa and Asia. Rural women make major and multiple contributions to the achievement of food security and produce more than half of the food grown worldwide. Women diversify and perform multiple tasks simultaneously to sustain their livelihoods, working on farms and engaging in off-farm activities, as well as continuing their critical role in terms of reproduction. Their responsibilities include the collection of water and fuel, activities that are particularly burdensome in areas with a poor social infrastructure (Olumakaiye, Ajavi, 2006).

Land and property ownership increases women’s food security, their bargaining power within the household and their social status as members of the community.

Credit enables producers to initiate, sustain, or expand agricultural production and increase productivity. However, producers with limited resources, especially rural women, receive only a minor share of formal agricultural credit even in countries where they are major producers.

Over the last decade, considerable attention has been given to micro credit interventions for the empowerment of women. However, mixed results have been seen in South Asia, one of the most active regions in promoting micro credit for women. Some studies showed that the bargaining position of women within the household was strengthened by access to credit and control over income and assets.

The spread of agro-industry and rural industrialization has increased the possibilities for women to access cash income through self-employment or the setting up of rural enterprises.

Status of women is an important factor affecting the socio-economic development of a country. There is no single indicator to measure the status of women in a society. Purdah (veil) system acts as the major obstacle for rural women to establish their rights (Begum, 1987). Despite the system of purdah women have to perform jobs such as ensuring food for their whole family, collecting firewood and cooking, feeding and rearing up children, feeding poultry birds and cattle, taking care of the households animals and birds, processing agricultural products, washing cloths and gardening in the homestead premises. No doubt, the contribution of women to their families is very significant and is not necessarily less than that of the male member of family. But their contribution in terms of labour and their roles in agriculture do not get social recognition.

As an agro based country women in rural Bangladesh have always been intimately involved in farm and non-farm activities. But their contributions are not properly assessed in calculating national income which is an urgent necessity to give the women due respect.
In terms of underlying factors, women’s control of income is a key promoter of household food security and nutrition. Women are more likely than men to spend extra income on nutrition inputs such as food. Women with more control over resources are also in a better position to provide care to children. Maxwell et al. (1992) defined household livelihood security as adequate and sustainable access to income and resources to meet basic needs (including adequate access to food, potable water, health facilities, education opportunities, housing, time for community participation and social integration).

**Fig1: A Gendered Conceptual Framework of the Determinants of Nutrition Outcomes**

*Source: (Olumakaiy, Ajavi, 2006).*
Asset ownership, access to land, labor and income opportunities are crucial for a secure livelihood. Social capital and gender are key factors in attaining and enhancing livelihood security and averting vulnerability, as well as reducing risks during times of social and economic change.

Food processing and preparation is exclusively women’s work. Women are also actively involved in livestock and poultry rearing. In cases of short-term food shortages, women have to manage by borrowing. Girls and women in general, especially pregnant and lactating women, suffer from nutrient deficiencies due to social customs and food beliefs and taboos (Balk, 1997). Watson et al. (1998) revealed that all adverse impact on the household livelihood food security of the small farmers depends on natural resources. Diversification and land degradation leading to intensive population pressure and improper resources use that degrade land, reduce its productivity, decrease food security and health prospects, income poverty and increase pressure for large scale migrations.

Food security is defined as “access by all people at all times to enough food needed for an active and healthy life. Its essential elements are the availability of food and the ability to acquire it” (Reutlinger, 1985). It is important to view food security from both national and individual angles.

At the national level food security means the availability in the country of sufficient stocks of food to meet domestic demand until such time as stocks can be replenished from harvests or imports. At the individual level, it means that all members of the society have access to the food they need, either from their own production, from market and/or from the government’s transfer mechanism.

The decline in the protein intake was even sharper. In contrast, the HIES data show that during the early 1980s and 1990s, per capita calorie intake went up steadily for the rural population but declined for the urban population due to the reduction in per capita cereal consumption (Figure 1.2). Between 1991-92 and 2000, urban per capita calorie intake fell by about 5 percent from 2258 kcal to 2150 kcal.

![Fig.2: Trends in daily per capita calorie intake, 1981-2000.](source)

Webb et al. (2002) reported that household consumption consists of expenditure on both food and non-food items that are enhanced by an increase in household income. Aspects relation to consumption, such as number of meals per day, access to clean water, dietary diversity, food prices, food quality, food taboos and share of non-food expenditure (e.g. education and health services) are crucial in mediating food utilization.
Food security is a concept that has evolved considerably over time and there is much literature on potential household food security indicators. Rural Women has multi-dimensional contribution to food security. These impacts to have been the subject of much speculation, but research in this area is uneven and generally inconclusive. Most studies conducted on this issue have concentrated basically on the economic aspects, ignoring the complex social and cultural aspects which are much more important for traditional value oriented countries like Bangladesh. The socio-cultural aspects of rural women of Bangladesh have recently been receiving most of the attention. Although a considerable number of studies on the economic impact of women on food security have been conducted, the findings remain far from social aspects. Therefore, it is important to understand the intentions of rural women and its socio-cultural and economic study on the rural women and their household food security.

This study will provide valuable information to the social workers, policy makers and researchers for further study. It will also make some tentative policy recommendations for rural women especially on their empowerment.

**Objectives of the Study**

The overall objective of this study will be to explore the key factors relevant to rural women affecting household food security.

The specific objectives will be as follows:

— To explore the key indicators of food security.

— To ascertain the factors affecting to food security of rural women.
Methodology

For selection of the study area Char Ishwardia of Mymensingh sadar was selected.

Considering the objectives, time and availability of fund and man power, one village named Char Ishwardia was selected purposively. Sample size of 80 households was chosen randomly for the present study. The data were collected from August to September 2013 through several visits.

The interview schedule was used to collect necessary information. Data were collected by the researcher himself by interviewing the selected respondents. After the phase of data collection, the collected data were edited and then coded. The edited data were analyzed by using statistical tool, namely SPSS (Statistical Package for Social Sciences) and Microsoft Excel. Tabular analyses were adopted in the study. Functional analysis, namely Log Linear model was used also to ascertain some factors such as education of respondent, family size, household income, access to credit, and social participation and so on which can affect household food security of rural women.
Findings and discussions

Key Indicators of Food Security: There is no single and direct indicator of measuring food security. Food security is dependent on agricultural production, food imports and donations employment opportunities and income earning, intra household decision-making and resource allocation, health care utilization and caring practices (Jones et al., 1998).

Education: It is a very important indicator of food security. Educated women know that how to be food secured in the household. So education is a prominent indicators through which the rural women become food secured in the community.

Availability of Credit: Sometimes due to the lack of credit. Household can not take required amount of nutritional food. So there are few households whose need credit but high dependencies on credit make them poorer and poorer through this process they have chance to become food unsecured.

Household Income: Household food security depends on the income of household. Those households having lower income have chance to become food insecured. On the other hand high income group or households are food secured most of the time compared to the lower income group, because high income group have ability to buy sufficient nutritional food items for the household members.

Family Size: Family size affects household food security negatively. If the family size of any household is large, there will be a chance to be food insecured for that household. So food security depends on family size of any household.

Employment status: An employed person can easily fulfill the requirement of daily dietary and nutritional need. That means employment status ensures household food security.Besides the above indicators, there are also important indicators of food security which are listed below:

- Income of respondent
- Nutritional knowledge
- Decision making ability
- Social Participation
- Extension service
- Food prices
- Food availability
- Household wealth status
- Household risk management strategies
- Access to natural resources
- Social network
- Psychosocial factors such as stress, depression, self-esteem and mastery.

The main determinants of household food security are income, household size, education, price of staple food and sex of household head (Obasi, 2004). Education and land size influence rural women to utilize the improve practices for household food security and nutrition (Lawal, 2005).

Food security at household level is closely linked to the national level. In order to assure food security at household level, government has to adopt various strategies including efforts to increases production. Government intervention in markets, public distribution of food and maintenance of national security socks (Haddad, Frankenberger, 2003). A household may quality
as food-secure on the basis of its classification (food secure, vulnerable to food insecure and food insecure), food consumption pattern, seasonality (harvest and period) and intra household distribution (Aiga, Dhur, 2006). Coates et al. (2006) identified income and caloric adequacy as household-level measure and costly to collect.

In most analyses of food security conditions in developing countries, multiple indicators are used to reflect the various dimensions of the problem. Some of the most common indicators in the assessment of food security conditions listed below:

- Food Production
- Income
- Total expenditure
- Food expenditure
- Calorie consumption, and
- Nutritional status

In spite of the common use of a relatively small number of food security indicators in much of the literature on the subject, however, not all programs can be evaluated using all or even some of these criteria.

**Construction of food security indicator:** Indicators are constructed from a set of observations, or measurements, of food security-related conditions, which are classified according to a set of criteria, aggregated, and placed in some program relevant perspective.

For example, an indicator of the number of food insecure households based on per capita consumption levels might be constructed by:

- Measuring the total food consumed by weight and food source within a household
- Calculating per capita caloric intake given estimates of the energy content by weight of specific food types and the overall household size
- Classifying households according to whether or not they are considered food insecure, by the definition of some minimum cut-off for the level of caloric intake (typically 80 percent of recommended requirements)
- Aggregating the total number of households considered to be food insecure,
- Placing the aggregate number of food insecure households in perspective by expressing it as a percentage of the total number of households in the community or project area.

**Measurement:** As indicated above, there are many commonly used measures that can reflect the various dimensions of food security. In addition, there are usually a number of ways of measuring any single indicator. For example, an indicator defined as the “average total calorie consumption per capita” may be measured through a detailed dietary intake survey based on the weighing of food portions by survey enumerators, or from information based on a 24-hour recall of survey respondents.

For other indicators, no such standards exist. As in some Muslim cultures for example, it may be misleading to include women in the pool of eligible working adults when calculating a dependency ratio. Where program capacity is limited, it may only be feasible to obtain consumption estimates based on respondent recall, rather than extensive food weighing methods.

**Factors Affecting Food Security:** Now attempts to relate the food security level of respondent household with a number of factors such as education of respondent, household size, income, access to credit, employment and socio-demographic aspects. Double log regression analysis has been used to derive effects of selected explanatory variables on food security.
To determine the effects of the explanatory variables, linear and log linear models were initially estimated for determining the effect of some selected factors on the household income of different categories of households. But the log linear model was better in terms of expected signs and magnitudes of the co-efficient, Adjusted R Square and p values. So the parameter estimators obtained from the log linear model were selected for interpretation.

Many factors may affect household food security but it is not proper to include all the variables in a model due to theoretical and economic considerations. Some important variables were selected to keep the model as simple as possible. Care was also taken to avoid the multi-co linearity of the selected variables.

The linear regression model was specified as follows:

\[ \ln Y = \ln a + b_1 \ln X_{1i} + b_2 \ln X_{2i} + b_3 \ln X_{3i} + b_4 \ln X_{4i} + b_5 \ln X_{5i} + b_6 \ln X_{6i} + b_7 \ln X_{7i} + b_8 \ln X_{8i} + b_9 \ln X_{9i} + b_{10} \ln X_{10i} + b_{11} \ln X_{11i} + b_{12} \ln X_{12i} + b_{13} \ln X_{13i} + U_i \]

Where,

\( Y \) = Food security
\( X_1 \) = Education of respondent (Years of schooling)
\( X_2 \) = Household size (No. of household members)
\( X_3 \) = Farm size (Decimal)
\( X_4 \) = Household income (Tk/ year)
\( X_5 \) = Income of respondent (Tk/Year)
\( X_6 \) = Savings (Tk/Year)
\( X_7 \) = Access to credit of rural woman
\( X_8 \) = Employment
\( X_9 \) = Nutritional knowledge of rural woman
\( X_{10} \) = Decision making ability
\( X_{11} \) = Spending ability
\( X_{12} \) = Social participation
\( X_{13} \) = Control over capital
\( U_i \) = Error terms

\( b_1 \)……. \( b_{13} \) = Co-efficient of respective variables

To measure food security, a household food security index will be constructed by defining a minimum level of nutrition necessary to maintain a healthy living.

\[ \text{Food security index} (K) = \frac{\text{Household daily per capita calorie intake}}{\text{Household daily per capita calorie required}} \]

For a household to be food secured \( k \) must be greater than or equal to one 
\( (k \geq 1) \) otherwise, the household is food insecure.

The education level of respondent was also considered as a variable \( (X_1) \). The variable was measured by the average number of years the family members studied in school, college and university.
The family size variables \((X_2)\) was measured by taking into consideration all the existing family members of the respondent households. This was termed as family size was considered to affect the household income. The variable farm size \((X_3)\) was measured by average land owned by all the respondent households. The variable household income \((X_4)\) was measured by average household income earned in a year. The variable income of respondent \((X_5)\) was measured by average income of respondent earned in a year.

**Effects of Selected Factors on Food Security**: The regression result (estimated values of the co-efficient and related statistics) is presented in the following table.

*Table 1: Factors affecting food security in the studied households*

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Coefficients</th>
<th>S. E.</th>
<th>t Stat</th>
<th>Pvalue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.55</td>
<td>0.37</td>
<td>-1.46</td>
<td>0.15</td>
</tr>
<tr>
<td>Education of respondent((X1))</td>
<td>0.06*</td>
<td>0.02</td>
<td>2.77</td>
<td>0.01</td>
</tr>
<tr>
<td>Family size ((X2))</td>
<td>-0.51*</td>
<td>0.05</td>
<td>-9.99</td>
<td>0.01</td>
</tr>
<tr>
<td>Farm size ((X3))</td>
<td>0.03</td>
<td>0.02</td>
<td>1.45</td>
<td>0.15</td>
</tr>
<tr>
<td>Household income ((X4))</td>
<td>0.09*</td>
<td>0.04</td>
<td>2.61</td>
<td>0.01</td>
</tr>
<tr>
<td>Income of respondent ((X5))</td>
<td>0.02</td>
<td>0.01</td>
<td>0.76</td>
<td>0.45</td>
</tr>
<tr>
<td>Savings ((X6))</td>
<td>0.00</td>
<td>0.00</td>
<td>1.40</td>
<td>0.16</td>
</tr>
<tr>
<td>Access to credit ((X7))</td>
<td>0.12**</td>
<td>0.06</td>
<td>2.03</td>
<td>0.05</td>
</tr>
<tr>
<td>Employment ((X8))</td>
<td>0.03</td>
<td>0.05</td>
<td>0.73</td>
<td>0.47</td>
</tr>
<tr>
<td>Health knowledge ((X9))</td>
<td>0.02</td>
<td>0.11</td>
<td>0.20</td>
<td>0.84</td>
</tr>
<tr>
<td>Decision making ability ((X10))</td>
<td>0.09</td>
<td>0.11</td>
<td>0.85</td>
<td>0.40</td>
</tr>
<tr>
<td>Spending ability ((X11))</td>
<td>-0.06</td>
<td>0.05</td>
<td>-1.13</td>
<td>0.26</td>
</tr>
<tr>
<td>Social participation ((X12))</td>
<td>0.24*</td>
<td>0.09</td>
<td>2.64</td>
<td>0.01</td>
</tr>
<tr>
<td>Control over capital ((X13))</td>
<td>0.01</td>
<td>0.07</td>
<td>0.17</td>
<td>0.87</td>
</tr>
</tbody>
</table>

*Adjusted R Square* | *0.60*

*Note: ** indicates 5%, and *indicates 1% level of significant*

The regression co-efficient of education of respondent was 0.06. The co-efficient was statistically significant at 1 per cent level. It implies that holding all other variables constant, 1 percent increase in educational level of respondent would lead to an increase of food security by 0.06 percent.

The regression coefficient of family size was -0.51. The co-efficient was statistically significant at 1 percent level. It indicates that holding all other variables constant, 1 percent increase in family size would lead to a decrease of food security by -0.51 percent.

The regression coefficient of farm size was 0.03. It indicates that holding all other variables constant, 1 percent increase in Farm size would lead to an increase of food security by 0.03 percent.

The regression coefficient of household income was 0.09. The co-efficient was statistically significant at 1 percent level. It indicates that holding all other variables constant, 1 percent increase in household income would lead to an increase of food security by 0.09 percent.

The regression coefficient of income of respondent was 0.02. It indicates that holding all other variables constant, 1 percent increase in income of respondent would lead to an increase of food security by 0.02 percent.
The regression coefficient of savings was 0.00. It indicates that savings has no any influence on food security.

The regression coefficient of access to credit was 0.12. The co-efficient was statistically significant at 5 percent level. It indicates that holding all other variables constant, 1 percent increase in access to credit would lead to an increase of food security by 0.12 percent.

The regression coefficient of employment was 0.03. It indicates that holding all other variables constant, 1 percent increase in employment would lead to an increase of food security by 0.03 percent.

The regression coefficient of health knowledge was 0.02. It indicates that holding all other variables constant, 1 percent increase in health knowledge would lead to an increase of food security by 0.02 percent.

The regression coefficient of Decision making ability was 0.09. It indicates that holding all other variables constant, 1 percent increase in Decision making ability would lead to an increase of food security by 0.09 percent.

The regression coefficient of spending ability was -0.06. It indicates that holding all other variables constant, 1 percent increase in spending ability would lead to a decrease of food security by -0.06 percent.

The regression coefficient of social participation was 0.24. The co-efficient was statistically significant at 1 percent level. It indicates that holding all other variables constant, 1 percent increase in social participation would lead to an increase of food security by 0.24 percent.

The regression coefficient of Control over capital was 0.01. It indicates that holding all other variables constant, 1 percent increase in Control over capital would lead to an increase of food security by 0.01 percent.

The estimated value of co-efficient of adjusted R square was 0.60. It indicates that after taking into account the degree of freedom (d. f.), the thirteen explanatory variables included in the model still accounted for 60 percent of the variations in food security.

Conclusion

Women constitute nearly of half of the total population of Bangladesh. The majority of the rural women have a great chance to ensure household food security. In our community most of the rural women are not empowered. Through women empowerment we can easily overcome the problem of food insecurity in the society. For being food secured women need empowerment but in Bangladesh, basically in rural area women are living in social and religious prejudice. To improve this unfortunate situation, some pragmatic steps are needed to be undertaken not only by the major intervening agencies, such as GO and NGOs but also by the rural community itself. Strategies aimed at empowering women must address both their practical gender needs and their strategic gender needs. In view of the above considerations, the following strategies are recommended:

— The status of rural women could be improved via a number of approaches, with access to formal education being a foremost concern. The provision of community-based education to rural women is something which, if supported by governmental organizations, NGOs and local community leaders, would be
effective in beginning to uproot illiteracy and related social deficiencies from rural communities.

— Promoting rural women’s participation in decision-making, including through affirmative action, and support for women’s organizations, labour unions or other associations and civil society groups promoting rural women’s rights;

— Supporting remunerative non-agricultural employment of rural women, improving working conditions and increasing access to productive resources;

— Encouraging informal women’s groups in rural areas would be a step toward increasing their empowerment since this would facilitate greater mobility outside the home and their access to media. Local community leaders, extension personnel, NGO workers and representatives from women’s organization would provide a vital contribution to such group by motivating them toward engaging in various development activities.

References


**Article history:**

- Received 25 April 2014
- Accepted 30 June 2014
Kosovo’s economy and Serbian economy

Knežević Vladimir¹⁷, Kvrgić Goran¹⁸, Ivković Dragan¹⁹

Abstract

The economic aspect of the study of Kosovo is absolutely neglected in comparison with other, mainly political aspects. Therefore, the economy of the area is for most unknown, which creates the most extreme and erroneous beliefs. One of it is that the economy has no positive performance and belongs to the most backward areas of Europe, and the other is that it is an invaluable economic potential, which if would be placed under the full control of Serbia quickly and effectively it will improve its overall economy. The aim is to get closer to the real picture of the economy of this area, and then put it into the context of the overall economy in Serbia. Therefore, Kosovo's economy is compared to the economy of the rest of the Republic, and the approximate projection of the current effects of potential integration into a single area. The economy of Kosovo is small, so the impact on the economy of the Republic in any case is irrelevant. On the other hand, the broader integration of Kosovo's economy is an essential prerequisite for reducing the gap in the underdevelopment of the rest of Serbia.

KEYWORDS: Kosovo, economic growth, inflation, external debt

JEL: E01, E23, O11

¹⁷ Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
e-mail: lena@vektor.net
¹⁸ Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
e-mail: goran.kvrgic@vs pep.edu.rs
¹⁹ Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia,
e-mail: dragan.ict@gmail.com
Introduction

Kosovo is the most expensive Serbian word. These and many other sayings and statements have become commonplace in recent decades in public life and politics which largely contributed to some aspects of our economic science. It is known that economy, like other social sciences, is not independent of politics, but again, we have an obligation not to ignore certain aspects of reality. Often some of the problems we exclude the interest and bypass it as an object of research, which leads to legally incomplete and inaccurate conclusions when considering other related aspects of reality and prevents complete understanding of broader issues. The economy of Kosovo is a good example of what has just been said.

Thanks to this long-standing attitude of Serbian economic science whose workers taught that it was not politically useful to deal with the economy of Kosovo. They have chosen "profitable" subjects and courses of study such as transition, European Union, global crisis, and so on. It is possible that due to the abundance of current economic challenges, the issue of the economy of the southern provinces remained almost entirely aside. We believe, however, that it deserves some attention for many reasons. Serbia's interest in this area has traditionally been high, and the economy is an inevitable aspect which was for a certain period of suppressed by policies. Therefore, we will try to show through a brief reminder primarily domestic economic releases on this topic that we can't completely ignore when dealing with the Kosovo issues, and this is often the case. The main goal is to look at these topics in the light of a more realistic, more accurate approach and the more appropriate comparison and classification, so that we, ultimately, avoid frequently present simplifications that result in extreme and unfounded judgments.

Therefore, we will analyze briefly the state of the modern economy of Kosovo, we compare it with the same parameters of the rest of the Republic, and finally show a simplified model, to make it look integrated in the economy of Serbia, of course, in the short term. The goal is to give the most comprehensive picture of the economy of the area and to answer the question, what could possibly be the current consequences of the hypothetical creation of an integrated economic space in Serbia.

In our opinion, Kosovo traditionally have been the least developed part of the Republic, and we are skeptical that the situation could significantly improve in the short post-war period and the administration of the Temporary Institutions. We also believe that the bigger and more powerful economy of the rest of Serbia would not greatly change their parameters in case of a possible realization of an integrated economic system. On the other hand, to overcome centuries of backwardness of Kosovo's economy, the only way would be just to integrate into the wider economic area, where it primarily refers to the whole of Serbia. This is primarily due to the extremely small market of Kosovo that in terms of lack of connection with the rest of the Republic, and in the region, is a limiting factor of development.

To comprehend the current economic moment of Kosovo, we must select a set of indicators that will give us the most complete picture of the economy of the area. We will focus attention on the last mid-term period for which data are available for the World Bank. This period was the center of interest since it is the period of the current global crisis, World Bank data to make the most reliable, since the Republic Bureau of Statistics does not provide relevant data base for this study. Due to the lack of organisation, underdeveloped institutions, and excessive political influence, the data of temporary authority within Kosovo are completely unreliable.
After considering the economic situation of Kosovo and the comparison with the economic parameters of the rest of the Republic, we analyze the hypothetical case of an integrated economic in short term and we’ll try to derive some conclusions and point out both the need for, as well as the possible limitations of future research in this area. Therefore, we are interested in the theoretical model of the integrated economy of the Republic in the first year after the operation in a single economic system.

**Economy of Kosovo**

It is common that revising of the economy of an area is based on the basic indicators of economic development, and it is generally accepted traditional gross domestic product per capita. For the purposes of this study it is completely appropriate, as there are no significant differences in use of other data, the World Bank when it is desired to estimate the state of the economy in any territory.

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>2736</td>
<td>3303</td>
<td>3199</td>
<td>3239</td>
<td>3706</td>
<td>3568</td>
</tr>
</tbody>
</table>


We see that the territory of Kosovo is undeveloped area that has only recently exceeded the threshold of middle income according to the classification of the World Economic Forum (Schwab, 2012, p.9). Under this approach, the boundary between the economies that are in a transitional phase between undeveloped and moderately developed exactly is U.S. $ 2999. This industry is also feeling the shock of the global crisis 2009th, but already 2011th started slow recovery, which are the trends characteristic of the whole region.

We will have a better idea of the dynamics of economic growth by the change of the growth rate of gross domestic product at constant prices.

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>8.3</td>
<td>7.2</td>
<td>3.0</td>
<td>3.2</td>
<td>4.5</td>
<td>2.7</td>
</tr>
</tbody>
</table>


We note the very high rates of economic growth in the pre-crisis period and almost twice slowdown thereafter. We could conclude that this territory is characterized by a relatively low level of economic development, and, at first glance, have quite satisfactory pace which opens perspectives until to the crisis. After that, the chances of recovery are uncertain for now. However, despite the fact that these results are within the regional framework and beyond, relatively satisfactory, the question of which period may be reduced traditional big gap to the rest of the Republic.

If we want a more precise look at the state of development of the economy in this region, we must also address the economic structure and the direction and pace of its change. If the data of the World Bank is correct, in the period 2007 - 2011 economic structure of Kosovo was stagnant, but the profile at a glance reflected the economy at a high level of development. The share of agriculture in GDP creation was 12%, industry 20% and services up to 68%.
In addition to this general view of the level of economic development, we should pay attention to the inflation. That is, theoretically, the parameter for assessing the quality of economic policy, especially monetary.

**Table 3: Inflation consumer prices (annual %)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.4</td>
<td>9.4</td>
<td>-2.4</td>
<td>3.5</td>
<td>7.3</td>
<td>2.5</td>
</tr>
</tbody>
</table>


This indicator shows not so small impact of the global crisis which was reflected in this area through the deflation of the 2009. Notwithstanding the unfavorable trends over the entire period, inflation is not apparent as the main problem of the economy of Kosovo. As we can see it in the whole period it was in the single digit, and it is accompanied by a decline in economic activity in the year of crisis appropriately.

The relatively satisfactory resolution of this issue certainly affects the currency used in this area (the euro). Lack of national currencies typically has a positive effect on inflation in transition countries, but on the other hand deepens the problem of the current balance. (Stanišić, 2012, p.11) Notwithstanding the undefined status of the area, it is reflected in the economic rule of monetary integration.

In considering this issue it must be bear in mind the specific status of the area. The monetary system of Kosovo is under the jurisdiction of the National Bank of Serbia, so it's pretty clear who is actually the supreme financial authority in this area. As we said, the official currency is the Euro. In the banking sector, there are several Western banks and "financial institutions" to obscure the structure of capital and non-transparent activities. In the area there is a major international impact conducting rigid philosophy of the IMF, but the central bank in the usual terms does not exist in the self-proclaimed state. It is certainly not the Central Banking Authority of Kosovo (CBAK) that has any such prerogative, but it does not have to be the key lever for regulating the money supply in circulation. (Božović, 2010, p.53-54)

If we have already mentioned the impact of the crisis on the economy of this area, its degree of openness should be considered. The ratio of exports and imports to gross domestic product can be helpful to describe this. Higher the percentage, foreign trade is much more liberal and the domestic economy is more open to the world.

**Table 4: Exports and imports of goods and services (% of GDP)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>16</td>
<td>15</td>
<td>17</td>
<td>20</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Import</td>
<td>52</td>
<td>53</td>
<td>52</td>
<td>56</td>
<td>57</td>
<td>53</td>
</tr>
</tbody>
</table>


It was an obvious great openness, but also the constant high import dependence of the weak economy, which certainly implies a deficit in the trade balance and balance of services, which ultimately destabilizes current account and typically deepens the crisis of foreign debt if it is to provide economic growth and the development and promotion of low personal and social standards typical for this area.

In the longer term it is certainly untenable situation in which the value of imports over 50% of GDP, while exports only twenty. Most of the export is to Italy, Albania and Macedonia, and most of the imports are from Macedonia, Germany and Serbia. Foreign
trade problem is certainly a long-term, the export structure is dominated by low-level processing, and on the import side, machinery and transportation equipment.

However, according to available data from the World Bank's nominal size of external debt KIM reached 2012th at the first glance, there should be a first-rate problem because the economy is around two billion dollars. This has many reasons. First, debts related to this area are not included, and were made before the start of the armed conflict in 1999. Thus Serbia repaid to foreign creditors in the amount of U.S. $ 858 million, and these funds are invested in the economy of Kosovo (Mikavica, 2013).

On the other hand, in addition to low domestic production in Kosovo is a low level of satisfaction of the needs of the population, while the pace of economic growth fails to change the image of the province as the least developed part of the Republic. Balance of payments is largely based on donations and remittances of the diaspora. Migrant remittances amounted to 30% of gross domestic product (www.Energyobserver.com)

Comparison with the rest of the Serbian economy

As stated above, we can conclude that the Kosovo is relatively undeveloped area, but with some positive characteristics that are related primarily to inflation and foreign debt. Since we explained the reasons of inflation and foreign debt, the overall picture of the economy of this region is rather bleak, with rather vague prospects. "In Kosovo there are 55,000 registered businesses. A large part of them are micro and small enterprises and almost all are engaged in domestic trade and services. The production is rare in itself, a production for export is almost non-existent, as a consequence, the domestic economy is almost no way out abroad and the capital that comes from abroad almost exclusively in the form of cash income citizens and less donor support. It seems that none of these things contribute to much of the investment in production." (Kusari, 2007, p.2)

When this all we have in mind, there is a question considering the characteristics of the economy of this region compared with the rest of the Republic of Serbia, for which we also use data from the same sources for the correctness of the methodological procedure. If we compare whether the level of economic development, at a glance we see that Serbia without Kosovo developed in relation to the area, and that the criterion WEF belongs to the class of moderately developed countries in the long term, and that takes place in the middle of this group.

| Table 5: GDP Serbian* per capita at current prices (U.S. $) |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| 5277 | 6498 | 5498 | 5073 | 5964 | 5190 |
| **Source:** http://data.worldbank.org/indicator/ |

Until the advent of the effects of the World Economic chryses this region's gross domestic product in Serbia without Kosovo (in all views: Serbia *) was almost twice as high, and the difference is somewhat reduced. This relationship is even more evident in the graph:
The difference is noticeable over the entire period. It is slightly reduced due to the main impact of the crisis in 2009th year, and then returned to nearly the previous level. All this is certainly not a surprise, given that Kosovo has always been the least developed part of Serbia. This can only mean that the provisional institutions and the administration in this regard have not managed to change anything for almost a decade and a half. Definitely, violently and illegally extracting the vast majority of the territory of Serbia is the economic system of the area brought no economic benefit.

Regarding the economic dynamics, as expected, small and underdeveloped economy achieves higher rates of economic growth along with other similar conditions, and all manner of great help from most powerful countries in the world.

Table 6: GDP growth in Serbia* (annual %)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serbia*</td>
<td>5,4</td>
<td>3,8</td>
<td>-3,5</td>
<td>1,0</td>
<td>1,6</td>
<td>-1,7</td>
</tr>
</tbody>
</table>

Source: http://data.worldbank.org/indicator/

In more developed economies under otherwise similar conditions in terms of openness and economic structure, the impact of the global crisis is stronger and more difficult recovery.
There is an obvious similarity in the dynamics of economic growth, but it should be noted that the higher rate of Kim was not significantly affected by the reduction of delays in the developed parts of Serbia because of the extreme differences in demographic trends. Thus it can be concluded that the economic growth in Kosovo, mainly demographic, rather than economic, or GDP per capita, more or less remains the same extent lags behind the rest of the Republic.

In terms of economic structure of these two areas, the similarity is also very large because the area of Serbia without Kosovo have in this period the dominance of the service sector in the creation of 61% of GDP, followed by industry with 28%, and finally agriculture with 11% (Figure 3). In both cases, the domination of the service sector is primarily due to already explained, the transition of de-industrialization.
The lagging economy of Kosovo from the rest of Serbia today, the middle level of development, can largely explain just presented significantly smaller share of industry in the economic structure. While it was in the territory of Serbia without Kosovo participated in this period in the creation of gross domestic product with, however, a solid 28%, the point is to participate in the province is only 20%, which is definitely not enough at the same level of economic development. The industry has suffered not only because of the before mentioned delayed the first phase of the transition that is taking too long, which is characteristic of the whole of Serbia, as well as the surrounding economy, but this is a problem in Kosovo further complicated the lack of skilled labor after the exodus of the Serbs and the disruption of traditional economic ties with the rest of Republic for political reasons.

We have already pointed out that the inflation rate is what represents the positive side of the economy of Kosovo in the period. It is significantly lower than in the rest of the Republic.

Table 7: Inflation consumer prices in Serbia* (annual %)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>6.4</td>
<td>12.4</td>
<td>8.1</td>
<td>6.1</td>
<td>11.1</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Source: http://data.worldbank.org/indicator/

This is certainly explainable only by the fact that euro is currency in the territory of Kosovo, while the rest of the Republic National Bank of Serbia is responsible for the conduct of monetary policy. A similar trend in inflation is expected due to the similarities in economic structure and other parameters, but a lower level in Kosovo is an obvious consequence of dependency in the conduct of monetary policy, which has already been discussed.

![Fig. 4: Inflation - comparison](http://data.worldbank.org/indicator/)

Source: Author according to the World Bank (http://data.worldbank.org/indicator/)
It should again be noted that waiver of monetary sovereignty is resulting in low inflation in Kosovo, but it didn’t contribute to the improvement of other economical results. The big question is whether it is worth the result itself, if one takes into account the overall situation in the province.

In terms of openness, when looking at the economy of Serbia without Kosovo, it can also be concluded that there aren’t autarchic tendencies.

Table 8: Exports and imports of goods and services in Serbia (% of GDP)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>31</td>
<td>31</td>
<td>29</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Import</td>
<td>55</td>
<td>58</td>
<td>47</td>
<td>53</td>
<td>54</td>
</tr>
</tbody>
</table>

*Source: http://data.worldbank.org/indicator/*

If these data are compared with those in Table 4 relating to the economy of Kosovo, we see that Serbia without Kosovo is little bit more closed, but much more active export economy which implies balanced between trade and services. In other words, the two economies have a liberal foreign trade, with the economy the rest of the Republic of exports most of its products, and imports lower than the economy of the province.

One gets the impression that after the 2009th when this area was most affected by the crisis, the economy of Kosovo suffered more in terms of international trade, which is probably due to different economic structures and less developed industrial sector. However, the differences are not significant in the dynamics and trends are very similar. In any case, the economy of Serbia without Kosovo is viewed from the trade point in a more favorable position, and achieves better results than the economy of Kosovo.

However, the economy of Serbia without Kosovo pressures size of external debt, which amounts to 34,438 billion U.S. $ according to the World Bank in 2012, which is seventeen times higher than in the case of the southern province. Of course, this issue is not to be kept in mind I already mentioned the fact that Serbia repaid a significant foreign debt that is actually related to Kosovo and to the redefinition of the relationship, the picture was considerably modified.
Projection of Unique Economy

It would be interesting to consider the projection of the state on Serbian territory integrated, however it has a very big restrictions regarding the status of Kosovo in the period. For example, if we do calculations based on World Bank, Serbia, as a whole is to maintain the position of middle-income economy, but with a GDP per capita of U.S. $ 4870, which is 6.2% less than in 2012 without Kosovo. On the other hand, using the conversion in proportion to the economy, we get for the same year economic growth rate of 1%, which represents an improvement of results in the area without Kosovo, which is the amount -1.7% (Table 7).

The entire economy of Serbia, because of the small share of the economy of Kosovo in it of about 15%, taking into account the uniform economic structure of both areas had almost an economic structure that deviates very little from the foregoing data without Kosovo. This condition is generally characteristic of the whole of the last mid-term period, as expected, given that the major changes in this area need more time, because the economic structure, as well as the most complex component of the slowest and most difficult to change. Also, this points to a kind of transitional problem, as well as slowing down in the transition, especially in times of crisis when the slowdown in the influx of foreign capital in all its forms. For the inflow of capital into the economy of Kosovo the most important factors are limiting legal uncertainty, weak institutions, non-transparent procedures and retail internal market.

Maybe at least it makes sense to analyze this period of inflation developments in Serbia, as already explained in the institutional opportunities to anyone in the financial sector and in the field monetary policy. However, a purely computational point of view, given the small share of the southern province of Serbia's economy, the inflation rate is determined by the condition of the majority and more developed territory almost
completely. So in the hypothetical case of integration of the two economies, inflation in the short remained at the level it is and without Kosovo, with the probable tendency of inflationary pressures in the future because of the need to address the most pressing economic problems in the province and the introduction of the dinar.

Regarding openness of Serbia, as a whole, it is significant. In fact if we recalculate data from Table 4 and 9, we would have also parameter reflecting an economy characterized by a liberal foreign trade policy.

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>29</td>
<td>29</td>
<td>29</td>
<td>33</td>
<td>36</td>
</tr>
<tr>
<td>Import</td>
<td>54</td>
<td>58</td>
<td>47</td>
<td>52</td>
<td>52</td>
</tr>
</tbody>
</table>

Source: http://data.worldbank.org/indicator/

In this case, due to the small importance of foreign trade anyone in relation to the rest of the Serbian territory, if these data are compared with those in Table 9 for Serbia without Kosovo, we see that the deviation is minimal.

With all the limitations of such a condensed and simplified analysis, we would generally conclude that in terms of the integration of the area of Kosovo in Serbian economic system, the overall economic situation of the Republic remained more or less unchanged. In the long run, of course, is an absolute mystery, but it is worth a look at the often mentioned vast mineral and energy resources of the Province and its possible contribution to the economy of Serbia. The truth is that there are within the regional framework vast reserves of lignite suitable for thermal power plants, but the revival of these, Serbia significant resources, requiring billions of euros of investment and tens of thousands of skilled workers (Ljepojević, 2006, p. 66-69). So, from today's perspective, it is indeed a very long term and very large uncertainties especially due to the collapse of the power sector of Kosovo after the 1999 war. "The current system, at present, can not meet the energy needs of the population at risk of poverty, and of the industry that uses the minimum capacity." (Popović, 2008, p.156) However, if you take a look in the long term, where you can see the entire region within the European Union, the costs of environmental protection and neutralize the destructive effects of massive lignite mining and power generation plants in Kosovo must be taken into account as an important factor that burden today is often neglected. (Popović, 2008, P.232)

"In such circumstances, where, with the exception of electricity and coal, all natural resources are within the myths and misconceptions, the only real prospect of economic development of Kosovo are small and medium-sized businesses and companies that may be part of a larger chain of production in the region." (Ljepojević, 2006, p.71) This certainly means that the only way of economic development of Kosovo led through integration with the rest of the economy of the Republic, but it is from today's perspective, the question of long term and large uncertainties. In any case, if one can say so, purely in economic terms, for Kosovo's separation from Serbia negative, in the longer term. In the short term, with generous foreign aid, the economy is relatively stagnant compared to the rest of the Republic. In the long term, prospects for development is difficult to see in a positive way without integration into the wider economic environment.
Conclusion

This is a brief overview of the general situation of the modern economy of Kosovo. Its purpose is to shed light on this aspect of the province which is very neglected, intentionally or accidentally, in economic research both domestic as well as foreign ones (Ljepojević, 2006, p.9). Given the strong and pervasive interest in our public for Kosovo, we consider it unacceptable to the Serbian economists insufficiently engaged in economic issues of the region. Therefore, the economic situation of the province is a great unknown to most people, which often creates an unrealistic image that usually goes in the direction that there is much better or much worse economic situation than it is, and consequently concluded or that the Serbian economy collapsed under load these additional problems, or that the integration of these economies was outstanding development incentives.

As we have seen, the economy of Kosovo is almost twice less developed than the rest of the economy as measured by the standard of the republic by GDP per capita. It achieves relatively high rates of economic growth, but it is absolutely not enough to reduce the inherited decades of the large gap in backwardness. In due time, the traditionally large population growth, it is certainly very difficult to do. The economic structure which otherwise corresponds to a higher stage of development, is the result of a completely spontaneous and very significant decline in the real sector of late and chaotic transition, which is almost entirely similar in other parts of the Republic. In Kosovo the situation is more complex due to the super high ethnic tensions, oversized corruption and crime, the underground economy and demographic expansion, which largely contributes to the high rate of unemployment. The credit rating is poor, and foreign direct investment are insufficient primarily because of weak institutions and the process of privatization which have positive effects in the whole context hardly noticeable.

One of the few positive indicators of the economy of Kosovo is a lower rate of inflation than the rest of the Republic, but it is a simple consequence of not having its own currency and the lack of independence of the monetary authority, which is a consequence of the specific status of this region. As a transitional economy, the following settings of the Washington consensus, the economy of Kosovo was very open, very similar to the whole economy of the Republic, but with a weaker export performance. Lack of industrial production plays a key role.

Yet Kosovo has no problem servicing the foreign debt which is relatively small, almost 17 times lower than that which applies to the rest of Serbia. This is certainly a good indicator since it is the difference in the size of the economy 1:7. However, one should bear in mind the dependence of local authorities, as well as the reluctance of investors placing capital in the economy in any form. It should be borne in mind that it would be necessary to accelerate economic growth and reduce the gap with the other parts of Serbia to generate much higher than the actual debt.

In the end, the question is whether the integration of the region with the majority part of the Republic in terms of the short-term economic gain or loss, and for whom. Of course it's difficult question of the status of Kosovo much more than an economic issue, but we have tried, with all the limitations, take a look at that aspect, which, we repeat, is not the only, nor was important. Firstly, Serbia would in this case other middle-income countries despite the decline in GDP p.c. because it is quite reasonable to 7 times greater economy can take no less insurmountable difficulties.

With all the limitations of a purely arithmetical manipulation, you would probably total economic growth rate was slightly better in Serbia, in the case of a comprehensive and unified economic system, but in terms of secession, while the economic structure in the short term,
however remained unchanged. The rate of inflation over the short term we expect the level of Serbia without Kosovo, with the likely inflationary pressures in the longer term. The economy would certainly remained very open and servicing the foreign debt might even, at first, was slightly easier, with the prospect of subsequent significant deterioration.

For the rest of the Republic of violent and illegitimate separation of the southern province of economic entities Serbia is not an unambiguous economic damage by observing basic macroeconomic indicators. In the long run, this also does not constitute a development constraint for the rest of the Republic. Of course, all this applies very conditional, because it's hard to talk about these issues from a purely scientific, purely economic point of view, but if you try it, we come to these conclusions.

In addition to needing more detailed study of this topic, what is the limiting factor for the lack of objective and unreliability of data, research should be developed in the direction of a special analysis of the northern part of the province with majority Serbian population. This would in any case considered by the many non-economic aspects that are an inseparable part of every discussion of all issues related to Kosovo. But, although the north of Kosovo also comprehensively, not just an economic issue, it does not mean you deserve objective scientific analysis Serbian economist, who has so far missed.

References

[4] Mikavica, A. (2013), Serbia are paying for what Kosovo is already sold, the daily Politika of 24.08.2013

Article history:
• Received 12 March 2014
• First Revision 22 March 2014
• Accepted 3 May 2014
Work Motivation: Comparative Analysis between Serbia and Bulgaria

Radović-Marković Mirjana, Vukotić Vladimir, Krumova Albena

Abstract

In this article work motivation and value of labor are analyzed on a theoretical level as factors for organisational effectiveness. The motives for work are related to job satisfaction and organisational effectiveness. Motivation for optimal work activity depends on the extent that work is a value for the individual employee. If work contributes to meaning it is a value that is a sufficient motivating factor. Reasons are given for the concept that the strength of work motivation depends not only on personal, but also on organisational factors such as the system of remuneration, group size, feedback, etc.

KEYWORDS: motives, values, work, satisfaction, organisation

JEL: J24, J28
Psychological and economic perspectives of motivation

Research throughout the twentieth century has identified different criteria and approaches for measuring the effectiveness of organisations. The motivation for work has always been considered an important determinant.

In today's business world the effectiveness of the organisation is not only associated with the motivation of the individual, but more broadly with the overall motivation of the work team. Teams play an increasingly important role in modern organisations and therefore to achieve effectiveness it is important not only to motivate the individual but also the team as a whole. In many organisations today the ultimate responsibility for work is increasingly shifted from individuals to teams (Hackman, 1987; Ilgen, 1994). Notwithstanding this trend, one cannot ignore the fact that in order to be effective organisations depend on the motivated individual for whom work is an intrinsic value.

Some authors are inclined to explain motivated behaviour, including the motives for work, from the perspective of reinforcement theory. Skinner (1950) explored reinforcement as motivators in animals. The theory contained three key variables - stimulus, response and reward. The stimulus is an event outside the individual that cause a behavioural response. The reward is provided if the reaction to the stimulus is correct and is seen as a reinforcement of the correct response. Through reinforcement the individual learns the right response in the presence of the appropriate stimulus. According to reinforcement theory people's behaviour depend mainly on external reinforcements, i.e. the rewards or punishments, rather than internal motives.

The concept of "intrinsic-extrinsic" motivation is attributed mainly to E. L. Deci (Deci, 1972, 1975; Deci, Ryan 1985; but see also Muchinsky, 1993; Robbins, 1998). The research they reported demonstrate that causal attribution affect human behaviour. In his Intrinsic-Motivation Theory Deci suggested that people are motivated by external rewards (for example, money) or alternatively by internal subjective reasons for example by the experience of pleasure from work-related behaviour. According to Deci intrinsic motivation energizes and directs behaviour primarily for reasons personal satisfaction. For many people work has an intrinsic value apart from any rewards. At the same time if an individual is not particularly attracted to a job but participates because of pay (extrinsic motivation), then increasing the pay will increase the level of motivation and efforts. On the other hand, Deci suggested that if an employee inherently likes work because it gives them pleasure or because of any other intrinsic motivation, it is likely that increased pay will reduce the level of motivation. Deci concluded that providing external rewards to people who like their work actually reduces their motivation. This finding produced many additional studies and evaluations of practical applications (Kruglanski, 1975; Lepper, Greene, 1978; Deci, Ryan 1985). Deci’s conclusions are not universally supported (see: Hamner, Foster, 1975; Phillips, Lord, 1980; Muchinsky, 1993).

An individual's motivation is influenced by intellectual, social, economic, emotional and other factors. In line with this, motivating a diverse workforce helps the companies create a workforce composed of people with many different backgrounds, perspectives, skill sets, and tastes (Radovic-Markovic, et.al.2014). According to Radovic –Markovic by bringing together the different backgrounds, skills, and experiences of the diverse workforce, businesses are better able to produce innovative and creative solutions that are a must to succeed in an increasingly competitive economy.
Many authors (e.g. Atkinson, Birch, 1978; Kanfer, 1990; Vroom, 1964) consider motivation an internal condition that energizes and directs the individual where to invest time and effort. It is clear that the strength of motivation depend also to some extent on the meaning that is attributed to a certain activity, on the intrinsic value of work, and more particularly on the content of the task that is performed. What is considered the purpose of work has a major impact on both motivation and behaviour of individual (Locke and Latham 1990). Overall work-related motivation is impacted by whether the work has a significant purpose, in the short-term range or as a long-term strategic goal.

During the last quarter of the 20th century the motivation theory of Vroom enjoyed extraordinary popularity (Vroom, 1964). The popularity of Vroom’s ideas is probably due to practical applications in the field of business. While the majority of studies support the theory, there are researchers who are skeptical about the validity of the concepts advocated in Vroom’s theory (Heneman, Schwab, 1972; Reinharth, Wahba, 1975). Other researchers attempted to modify the theory (Graen, 1969; Porter, Lawler, 1968). The theory of Vroom is relevant to work activity as it accentuates expectation. According to Vroom, the strength of motivated behaviour depends on the expectation that the completed action will be successful and rewarded, and on the attractiveness of the reward.

Regardless of culture work motivation is influenced by several other factors. An important variable is the system of remuneration introduced into organisational policy. The current trend is shifting the focus of responsibilities from the individual to teams. Managers therefore should strive to motivate the team as a whole and not just focus attention on the individual. Creating "team motivation" depend in turn on the system of remuneration that exists within the organisation. For example, if remuneration focuses on individual rewards that would tend to reduce the level of cooperative behaviour required by team work and creates internal contradictions and conflicts (Argote, McGrath, 1993).

Motivation for work is however dependent not only on personal characteristics, but also on the characteristics of the group and group phenomena, e.g. social loafing (Ingham, Levinger, Graves, Peckham, 1974; Kravitz, Martin, 1986). Studies show that large groups that produce anonymity and de-individuation produce social loafing (Jackson, Harkins, 1985). Other studies have demonstrated the harmful effect of social loafing on group performance (Karau, Williams, 1993) and its relationship to work motivation. The detrimental effect of social loafing on the effectiveness of the group can be reduced when individual performance is identified through feedback as a control mechanism. The influence of feedback on productivity on work and on the effectiveness of the organisation has been demonstrated in other studies (Algera, 1990; Locke, Latham, 1990).

We also should not ignore the manager's role in a workplace that fosters high employee morale and positive employee motivation. They must use a variety of methods such as modifying the work environment, promoting employee participation and rewarding employees. In this context, managers must play a more supporting rather than supervisory role in the whole process of employees learning (Radovic-Markovic, et.al.2014).
Studying of motives for work of employees from Bulgaria and Serbia

This research aims at studying which are the leading motives for work of employees from organisations based in Serbia and Bulgaria. It covers aspects of work concerning mainly external factors for the individual like payment, working conditions, job security. The assumption is that various values related to work would motivate each individual to a different extent. The task of this research is to identify the main trends in work motivation of the subjects from the two countries on the basis of their choices of the motives for work they stated as being most important for them.

Research Methodology

Based on the review of the literature a survey questionnaire was developed. The study was undertaken in the year 2014 in Bulgaria and Serbia. The questionnaires were completed using an electronic survey system. The survey asked participants to choose one out of six factors in terms of importance for motivating them to do their work. The response categories were from 1 = “most important” to 6 = “least important”.

The main hypothesis in the research is that the monetary rewards play a role in motivating employees (Champagne, McAfee, 1989). The main aim of the research is to find out the differences in the leading trends between the two countries by studying the factors motivating employees for work.

Subject of research

--- The Serbian sample

The sample consisted of 100 participants of Serbian nationality found by using an online version of the survey. The participants were adult employees randomly sampled from companies in Serbia.

Gender divided the sample into two almost equal by size groups, with slight domination by the female gender (around 55%).

Distribution of respondents by age showed that 59% were between 26 and 34 years old. Fourteen percent of the subjects were aged 45-54 years followed by those aged 18-25 and 35-44 years (10% each). The smallest age group (7%) was the one of respondents aged 55-64. The data demonstrated the sample was relatively young.

By the degree of education, the respondents in this sample were divided as follows: 58% of them have a master’s degree. Twenty-six percent of the subjects were people who have graduated high school, followed by 12% college graduates. The smallest portion of participants (4%) had a primary school diploma.

In conclusion, the demographic profile of the sample revealed a young sample dominated by women and by people with master’s degrees.

--- The Bulgarian sample

The sample consisted of 54 participants of Bulgarian nationality found by using an online version of the survey. The majority of the sample included women (83%). Men were seventeen percent.
In terms of age, 35% of the respondents were between 26 and 34 years old. Twenty-six percent of the subjects were aged 35-44 years followed by those aged 18-25 (24%). The smallest age group (15%) was the one of respondents aged 45-54. The mean age of subjects was 33 years.

With regard to their education, 61% of the respondents had a master’s degree, 33% had completed a bachelor’s degree, while 6% had graduated high school.

In conclusion, the demographic profile showed a young female sample which consisted mainly of people with a master’s degree.

Results and discussion

This research does not claim it is comprehensive. Its aim is to find out the presence of certain trends in the two samples. The comparative analysis of the results yielded from the two countries is visualized in Table 1. As a leading motive for work the respondents from Serbia stated the good salary whereas in the Bulgarian sample the leading motive was the interesting job.

Table 1: Comparative analysis of the results from the research

<table>
<thead>
<tr>
<th>Flexible working hours</th>
<th>Possibility of promotion</th>
<th>Good working conditions</th>
<th>Job security</th>
<th>Good salary</th>
<th>Interesting job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>Serbia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.1</td>
<td>11.8</td>
<td>13.0</td>
<td>14.5</td>
<td>16.7</td>
<td>19.7</td>
</tr>
<tr>
<td>19.7</td>
<td>14.8</td>
<td>14.8</td>
<td>21.1</td>
<td>19.7</td>
<td>29.6</td>
</tr>
</tbody>
</table>

The difference between the distributions is not statistically significant (Chi-square = 2.25; p = 0.813). The differences between percentages of the particular factors are also not statistically significant although there are two large differences – in “good salary” (t = -0.93; p = 0.178) and in “interesting job” (t = 1.28; p = 0.101). The high degree of closeness of the results in the two countries is evidenced by the high value of Spearman's Rho: 0.657.

However, the study of work motivation yielded interesting results in the Serbian sample. The good salary is the leading aspect that motivates the employees. The next two important factors for the subjects were the interesting job and good working conditions.
third leading motive in the responses of the subjects was the possibility of promotion in the organisational hierarchy. Job security was pointed as a fourth important motive for the respondents. The least important motive indicated by the subjects was the flexible working hours.

The main hypothesis of the study, i.e. that monetary rewards play a role in motivating employees was confirmed by the results in this sample.

The respondents from the Bulgarian sample indicated the interesting job as the most important motive. The next important motive was the good working conditions. It was followed by two equally important motives for the subjects: the job security and good salary. Then the respondents pointed to the motive possibility of promotion in the organisation. As in the Serbian sample, the least important motive for the Bulgarian respondents was the flexible working hours.

In the Bulgarian sample, the main hypothesis was rejected as the good salary was not among the leading motives.

An interesting aspect in relation to education was the fact that more than a half of the respondents in the study (58% of the Serbian and 61% of the Bulgarian) had completed higher education.

With respect to distribution by gender and age, both samples were dominated by young women aged between 26 and 34 years.

In conclusion, we could say that the research fulfilled its aim revealing the various trends in the motives of employees from the two countries. The conducted analyses are not comprehensive but they provide directions for further research. The samples are considered through the differences in gender, age and education of participants but the collected demographic data allows future analyses using other characteristics like length of service, demotivational factors for work etc. This would reveal new aspects of motives for work, related to job satisfaction and organisational effectiveness.

Summary of the analyzed data

The studied motives are difficult to consider as separate and independent factors leading to work satisfaction. They are interrelated and represent the main needs of the employees that form stable work motivation. The main aim of the research was to find out which are the leading motives for work of employees from Serbia and Bulgaria.

The results from the conducted research identify some differences in the individual perceptions of work values that motivate the employees in Serbia and Bulgaria. Talking about the two populations, however, we have to bear in mind that we use this term only conditionally, and only with regard to this research which is not representative for the two countries. Also, the percent differences between the two samples are too small. Nevertheless, for the respondents from Serbia there was a trend – i.e. the main motive for work was the good salary which confirmed the research hypothesis. To some extent this result can be interpreted as expected because people at this age are more oriented to material security. The financial security is often a main criterion of choice among the young people as it is related to increase of their material standard and creation of a family and home.

As it was indicated, the Serbian sample is relatively homogeneous by gender as the women are slightly more than the men. Identification of payment as a main motive is a
serious indicator that the material well-being turns into a priority also of working women. The change of the status of women during the last decades, from housewives and mothers to active employees, is a trend which is observed in many societies and cultures. The results from this research are an evidence of the more active role of women on the labor market and of their desire for fair and satisfactory payment of work. It can be said that motivation of women for good payment of work is as clearly expressed as the one of the men in this sample.

In the Bulgarian sample the main motive stated by the respondents is the interesting job. Probably for the respondents material pay itself is insufficient to form satisfaction in the employees as the factor “money” is the third important factor. As it can be seen from the results, for the employees it is important that they like their job and are attracted by it. It is possible that this trend is due to the fact that part of the subjects from the Bulgarian sample is included in continuing education and qualifications. Most probably, this dominant need for knowledge at the moment when the research was conducted influenced their motivation for engagement in a job that is interesting.

The least important motive for the respondents in both samples is the flexible work time. It is obvious that this trend is valid for these samples. It seems that for the young people who are striving for material security and fast promotion in the organisational hierarchy the fixed working hours are not problematic. The need for flexible working hours is characteristic for more mature people and for the employees who have families. The flexible working hours suppose easier planning and organisation of tasks and activities in everyday life and provide better balance between the personal and professional life of employees.

**Conclusion**

Work motivation is really a determinant of organisational effectiveness, which means that the effectiveness and productivity of an organisation will be higher if individuals are highly motivated for work activity. But in itself the high motivation for work depends on many other factors of psychological and organisational nature. Employees will be highly motivated for work if there is job satisfaction, if work itself is valuable to them, if work activity is related to their long-term strategic purposes, etc. In addition to these personal factors, there are organisational factors that determine the motivation for work and these are: the system of remuneration, organisation size, the presence of a feedback as a control mechanism of work performance, etc. All these factors must be considered when developing a common concept of the psychological and organisational factors which determine organisational effectiveness.

Identification of the motives in this research showed the various importances of certain work values for the respondents from both countries. It could be summarized that the external factors like the possibility for promotion, provision of the necessary conditions for work and the flexible working hours motivate the employees’ behaviour. However, for them the more important motives are the good salary and the needs for an interesting and attractive job.
References


**Article history:**

- Received 23 May 2014
- Accepted 25 June 2014
The Participants on The Serbian Insurance Market

Piljan Ivan, Cogoljević Dušan, Vujadin Nataša

Abstract

The insurance sector significantly influences the economic development of any country and it is an important factor of financial sector stability. The Serbian insurance sector is underdeveloped and according to the level of the development, it is positioned under the average value of EU countries. This is corroborated by the indicators of insurance market development – the relation between the total premium and the GDP and the total premium per capita.

Based on the 2004 Law on Insurance and the Law on the Amendments to the Law on the National Bank of Serbia, the supervision of insurance activities has been entrusted to the National Bank of Serbia.

In 2004, the National Bank of Serbia defined and revealed its strategic goal in the insurance area - creating and observing a safe and stable insurance sector and ensuring public trust in the insurance sector, and protecting insured and third persons.

According to its legal authority, the National Bank of Serbia delivers acts required by law, supervises insurance sector activities, issues and revokes licenses for businesses of insurances, reinsurances, brokerage and insurance agencies and businesses directly connected with insurance activities, gives consent to acts, issues and revokes consent for appointment of members – the Director and Supervisory Board, issues and revokes consent for acquisition of qualifying holdings in insurance companies, processes statistical and other information, maintains registers of data according to the Law, considers complaints on the work of insurance companies applied by insured and the third parties, including the businesses of mediation activities.

KEYWORDS: insurance market development, supervision over insurance activities, insurance company

JEL: G22

23 Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
e-mail: piljanivan@gmail.com

24 Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
e-mail: dusan.cogoljevic@vspep.edu.rs

25 Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
e-mail: natasavujadin@gmail.com
Introduction

After taking over the surveillance of the insurance sector, the existing situation was regarded, inter alia, as the following: an absence of good practice in business activities, inadequate management, a lack of safety of investments of insurance funds in the purpose of settling the undertaken obligations toward policyholders and third parties, no regular reporting, an ineffectiveness of business books (and thus the unreliability of the shown data), the overflow of insurance funds in related enterprises, irregular payment of liabilities to policyholders and third parties, double policy issuing, setting incorrect goals of insurance company business goals instead of protecting policyholders and clients, a lack of public confidence in the insurance sector, a high level of irregularity in business, a significant number of legal entities which run businesses in the insurance sector without licenses, an insufficiency or inadequacy of company activity, and an absence of effective auditing and actuary work. A certain number of insurance companies were unable to meet their obligations towards their clients and policyholders, although when they were met, it was funded from the current flows, meaning that the premiums were paid for new policies, instead of safe investments, and they served for the settling of liabilities in the policies issued prior. In this way, there was a pyramidal system of insurance which contributed to a complete loss of public confidence in this sector.

To accomplish the set goal in the mentioned conditions, the National Bank of Serbia directed its activities in several directions at the same time:

- Sector stabilization
- Increasing public confidence in the insurance sector
- Creating a basis for sector development
- Creating and developing the function of supervision and
- Continuous training of employees.

Insurance market participants in Serbia

In the following table, there is an overview of participants in the insurance market per year and the analysis of the present condition.

*Table 1: Participants on the Serbian insurance market*

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC life</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>IC non-life</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>IC life + non-life</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>IC reinsurance</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>IC reinsurance +</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>insurance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance companies –</td>
<td>19</td>
<td>17</td>
<td>20</td>
<td>24</td>
<td>26</td>
<td>26</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majority foreign</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>17</td>
<td>19</td>
<td>19</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>ownership</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Domestic insurance companies | 4 | 9 | 7 | 7 | 7 | 7 | 7 | 7  
Banks | 5 | 11 | 15 | 16 | 19 | 19  
Legal entities | 40 | 44 | 59 | 65 | 69 | 77 | 79 | 84  
Individuals - Entrepreneurs | 35 | 87 | 123 | 122 | 122 | 117 | 109 | 105  
Individuals- Agents-Brokers in insurance | 2,578 | 3,982 | 5,002 | 8,190 | 10,124 | 11,418 | 13,363 | 14,123  
Travel agencies | 1 | 1 | 1 | 1  


While taking over the surveillance function over the insurance companies, the National Bank of Serbia found the insurance market to be at an extremely low level of development.

The number of insurance companies in 2005 was reduced by 50% (from 40 to 19), while four companies started the process of voluntary liquidation, one affiliation was performed, and from December 31, 2005 there were 19 insurance companies on the market, of which 16 dealt only with insurance businesses, 2 companies with the reinsurance business and one company dealt with the insurance and reinsurance business. From the companies dealing with insurance businesses, only one company dealt with life insurance, 7 companies with non-life insurance, and 8 companies with life and non-life insurance companies(NBS, (2006). Insurance Sector in Serbia, 2005 Report, Belgrade).

Insurance companies were obliged to carry out, until December 31, 2007, the separating of insurance and reinsurance, as well as the separating of life and non-life insurances. As a result of the mentioned and as a result of other status changes of insurance companies, such as mergers and acquisitions, it is realistic to expect some changes in their number.

According to the ownership structure of 19 insurance companies in 2005, 5 had a majority foreign ownership, and 14 domestic, of which 2 companies were in social and state ownership, and 12 companies in private ownership.

In this period, it is characteristic that companies in a majority foreign ownership recorded a small participation on the market of only 12%, making up 71% of the life insurance market. The two largest companies participated with 70% in non-life insurances.

The stabilization of the insurance market and creating an adequate environment will create the conditions to attract serious strategic partners who will bring to the market new quality and knowhow. This is supported by the experience of the countries from the region in which new participants contributed an increase of competitiveness for the existing companies.

In 2005, the number of other participants on the insurance market - brokers and agents - was reduced also by about 50% (from 149 to 75), but at the same time, 90% of the existing lost their work licenses, and in the meanwhile 59 of the legal entities and entrepreneurs were licensed to operate, and thus on the sales network, besides insurance companies, 40 legal entities participated, 35 individuals-entrepreneurs, one tourist agency, and 2,578 individuals who are licensed for advocacy or brokerage in the insurance. The mentioned activities significantly improved the quality of the sales network which is to be improved by licensing the banks to sell insurance policies.
There were no important changes in 2006 on the Serbian insurance market, but with the stabilization of the insurance market, conditions for attracting serious strategic partners were created, which would, on one hand, influence its development by introducing new products, and on the other, improve the quality of the insurance companies’ business activities by way of a new method of capital management and careful risk management. (NBS (2007). Insurance Sector in Serbia, 2006 Report, Belgrade)

In 2007, the number of insurance companies increased from 17 in 2006 to 20 in 2007, of which 17 were dealing only with insurance, 2 only with reinsurance, and one company was dealing with both. From the companies engaged only in insurance businesses, 4 dealt only with life insurance, 8 only with non-life insurance and 6 were engaged in life and non-life insurances. At the beginning of 2008, one more license was given to an insurance company with a majority foreign ownership for performing non-life insurance activities. (NBS (2007). Insurance Sector in Serbia, 2006 Report, Belgrade.)

According to the ownership structure, of 20 insurance companies in 2007, 13 had a majority foreign ownership, 7 domestic, of which one was in social state ownership and 6 companies were privately owned.

Based on all indicators, it can be concluded that the stabilization of the insurance market was a strategic goal of the National bank of Serbia, and it was accomplished after 3 to 5 years by creating business conditions which attracted as strategic partners companies in a majority foreign ownership. By privatizing one of the two biggest participants on the market, the insurance companies in foreign ownership increased their, formerly recorded, dominant share in life insurance premiums (from 68.7% in 2004 to 92.6% in 2007), and they also took over a dominant participation in non-life insurance premiums – 59.1%, total assets at 58.6% and the number of employees at 70%.

In the sales network in 2007, along with insurance companies, 5 banks licensed for insurance activities participated, as well as 59 legal entities, 123 individuals-entrepreneurs, one travel agency, and 5,002 individuals licensed for brokerage and advocacy. Thus, the participation of banks in selling insurance policies should contribute to sales network quality improvement. Accordingly, insurance companies started to introduce products intended for selling in banks, or in other words, products adjusted to the needs of bank services users.

In 2008, the number of insurance companies in Serbia increased from 20 in 2007 to 24, of which 20 dealt only with insurance, 3 with reinsurance and one with both insurance and reinsurance. From the companies engaged with insurance, 6 dealt with life insurance, 9 companies with non-life insurance, and 6 companies with life and non-life insurance. Observed through the ownership structure of 24 companies in 2008, 17 had a majority foreign ownership, 7 domestic, of which one was in social and state ownership and 6 were privately owned. (NBS, (2009). Insurance Sector in Serbia, 2008 Report, Belgrade)

Via the successful process of privatization in the former period as well with entry on the market of foreign companies with green field licensing, insurance companies in foreign ownership increased their prior recorded dominant share in non-life insurance premiums, from 59.1% in 2007 to 61% in 2008, and total assets from 58.6% to 61.2%, retaining the participation in life insurance premiums at the same level from 92.6% and a 70% employee participation.

In 2008, in the sales network, along with insurance companies, 11 banks participated which were licensed for insurance advocacy, as well as 65 legal entities, 122 individuals-entrepreneurs, one travel agency and 8,190 individuals licensed for brokerage and advocacy in insurance.
In 2009 in Serbia, 26 insurance companies operated from which, related to the previous year, two were newly established - one for life insurance and one for reinsurance.

In the sales network, the number of banks engaged in insurance, as well as legal entities, brokers and agents increased, so than there were 15 banks licensed for insurance, 69 legal entities, 122 individuals/entrepreneurs, one travel agency, while 10,124 private individuals received a certificate for advocacy and brokerage.

In 2010, there were 26 insurance companies and their number remained unchanged related to the previous year (NBS,2011, Insurance Sector in Serbia, 2010 Report, Belgrade).

In the sales network, we have an increase in the number of banks by 1, legal entities by 12, entrepreneurs by 15 and brokers and agents by 1,294.

In 2011, there were 28 insurance companies, 2 more than in the previous year and they also worked with non-life insurance (NBS,2012, Insurance Sector in Serbia, 2011 Report, Belgrade).

In the sales network, there was an increase in the number of banks by 3, legal entities by 2, brokers and agents by 1,945, and a reduction in the number of entrepreneurs by 8.

In 2012, some 28 insurance companies were in business and their number remained unchanged related to the previous year. There were 24 companies engaged with insurance and 4 companies with reinsurance. Of the companies dealing with insurance, 7 companies dealt with life insurance, 11 with non-life insurance, and 6 with life and non-life insurance. According to the ownership structure of 28 companies, 21 had a majority foreign ownership, while 8 companies were domestically owned (NBS, 2013, Insurance Sector in Serbia, 2012 Report, Belgrade).

In the sales network, the number of banks remained the same, the number of legal entities increased by 5, brokers and agents by 760, and the number of entrepreneurs was reduced by 4, which means that there were 19 banks licensed for insurance, 84 legal entities (insurance brokerage companies and insurance agencies), 105 brokers (individuals/entrepreneurs), while 14,123 individuals were licensed to deal with insurance matters.

Conclusion

Based on the given data, we can conclude that the number of participants on the insurance market in Serbia for the period 2005-2012 has increased from year to year. The number of insurance companies increased from 19 to 28, which is a 47% increase. Furthermore, it is typical that there is an increase of the number of insurance companies which have a foreign ownership majority. A good indicator is the increase of the number of banks dealing with insurance, something which will undoubtedly influence the quality of services in insurance. Furthermore, the number of legal entities increased from 40 to 84, which is an increase by 1,105. Also, the number of entrepreneurs increased from 35 to 105, which is a 2005 growth. The number of brokers and agents increased from 2,578 to 14,123 - a 448% growth.

The key areas with which companies should deal with at this moment are the following: corporative management, which is an adequately established system of internal control, improvement of risk management, improvement of the techniques of valuing investments, transparency strengthening, strengthening of good business practice and fair treatment of clients, as well as the training of potential policyholders. This could contribute
to the strengthening of policyholder trust and creating conditions for the development of this segment of the financial system.

What should especially be emphasized is the importance of training and preparation for implementing a new methodological framework for risk management, Solvency II. Namely, adequate risk management is of a crucial importance for a successful insurance business. In fact, this is the essence of the Solvency II directive, according to which insurers are expected to observe and quantify the risks to which they are exposed in their business, and a more efficient management of the risks and it introduces more sophisticated solvency requests in the aim of providing sufficient capital for risks. The applying of the directive, according to the draft of the new Law on Insurance, is planned after entry into the EU.

References


Article history:
- Received 14 May 2014
- Accepted 23 June 2014
Application of VaR (Value at Risk) method on Belgrade Stock Exchange (BSE) optimal portfolio

Miletić Siniša²⁶, Korenak Boris²⁷, Lutovac Miloš²⁸

Abstract

The main objective of this study is to determine the adequacy of the measurement of market risks of financial institutions in Serbia by the method of Value at Risk (VaR). For investors, in the current global financial crisis, it is particularly important to accurately measure and allocate risk and efficiently manage their portfolio. Possibility of application of VaR methodology, which is basically designed and developed for liquid and developed markets, should be tested on the emerging markets, which are characterized by volatility, illiquidity and shallowness of the market. Value of VaR in this study was calculated using historical and parametric methods and backtesting analysis was used to verify the adequacy of the application of VaR models. Backtesting VaR model performance analysis was conducted to compare the ex-ante VaR estimate to the ex-post returns. The empirical results show that parameter exponentially weighted moving average model gives lower values at risk in both cases (95% and 99%) due to the fact that this method assigns weights to more recent returns while our portfolio is exposed to a lower volatility in recent time. Based on the results of Kupiec's and Christoffersen's test, it was observed that VaR estimates obtained by both, parametric and historical simulation, give a good prediction of market risk, at 95% and 99% confidence level.

KEYWORDS: market risk, optimal portfolio, Value at Risk (VaR), backtesting, EWMA, GARCH models, historical simulation

JEL: G12, G32, C13, C22, C52

²⁶ Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
e-mail: sikimil72@gmail.com
²⁷ Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia
e-mail: korenak.boris@hotmail.com
²⁸ Belgrade Business School, Belgrade, Serbia
Introduction

Banks, investment funds and other financial institutions often use the concept of value at risk (VaR) as a measure of market risk. Value at risk is the assessment of the maximum loss in value of portfolio over a given time horizon at a given confidence level. Based on the VaR financial institutions are able to determine the level of capital that provides cover losses and ensure the financial position of extreme market movements (Mladenović, Miletić, Miletić, 2012).

In the global financial crisis conditions for investors are extremely important to accurately measure and allocate risk as well as to efficiently manage their portfolio. The influence of extreme events on the trends in financial markets in emerging countries is even more pronounced, since it is a market characterized by lower levels of liquidity and significantly smaller market capitalization. Financial markets in emerging countries are usually characterized by a number of reforms and greater likelihood of internal and external shocks such as inflation, a sudden depreciation of national currencies, changes in credit ratings, risk premium change, etc. As this market is characterized by a greater influence of internal trade and consequently a higher degree of volatility than the markets of developed countries, the distribution of returns is significantly more distorted than normal, which makes evaluation of VaR with standard methods that assume a normal distribution of returns more difficult. Application of VaR methodology, which is basically designed and developed for liquid and developed markets, is necessary to test on emerging markets that are characterized by extreme volatility, illiquidity and the shallowness of the market. Implementation of the VaR methodology in the investment process is directly related to the selection of appropriate method of estimation. In selecting the appropriate method of key importance is that it accurately determines the likelihood of losses (Mladenović, Miletić, Miletić 2012).

There is now a huge and increasing literature on value-at-risk. Some selected papers are reviewed here. Almost all researchers are unanimous that there is no single approach or a VaR model that is optimal in all markets and in all situations. According to previous published studies, models of VaR models based on moving averages give a good prediction of market risk, and that results vary depending on the loss function that was used, the chosen level of confidence VaR, the period for which the survey was conducted (turbulent or normal), used model for assessing the VAR and etc.

For example Degiannakis (2004) conclude that different technique of volatility are applied with different goals and objectives, and that the modeling of time varying volatility is necessary for estimating the VaR. Linsmeier and Pearson (1996) conclude that there is no simple answer to the question which VaR model gives better estimates of market risk given the fact that volatility is not constant but varies over time. Different statistical characteristics such as volatility clustering, flattening and asymmetry may affect the calculation and selection of appropriate model of VaR. Although most commonly used method of Risk Metrics assumes normality of distribution of returns, numerous empirical studies show that the distribution of returns is not normal. Thus, value of VaR obtained assuming normal distribution underestimate the true value of market risk. (Duffie et al., 1997).

Mladenović, Miletić and Miletić (2012) considers adequacy of VaR models in selected emerging economies with the daily returns of Bulgarian (SOFIX), Croatian (CROBEX), Czech (PX50), Hungarian (BUX), Romanian (BET) and Serbian (BELEX15) stock
exchange indices before and during the financial turmoil. Authors conclude that GARCH type models with t error distribution give better 5% and 1% VaR estimation in comparison to normal error GARCH type models. Authors emphasize that GARCH type models for most confidence levels are not outperformed by EVT approach and estimations derived from POT.

Miletić and Korenak (2013) analyse the effectiveness of GARCH models in estimating Value-at-Risk for MSCI World Index, one of the most widely known benchmark for global stock funds, before and during the financial crisis. Daily returns of stock market index MSCI is analysed during the period Jun 3, 2002 to March 22, 2013 in respect. Authors applied symmetric GARCH and asymmetric GARCH models, as VaR forecast models. The performance of the VaR is assessed by Kupiec test unconditional coverage which represent the most famous test in this group. Results of backtesting show that assessed Value-at-Risk for EGARCH model is adequate for both confidence level according to Kupiec test for pre crisis period. On the other hand, EGARCH (2,1) model used for calculating VaR with 99% confidence level according to Kupiec test seems to be adequate if we assume both normal and Student's t distribution of returns. At the same time, EGARCH (2,1) model did not pass Kupiec test at 95% confidence level with assumption that residuals follow normal and Student's t distribution. Since, Basel Committee prescribes testing VaR model adequacy at 99% confidence level, at these confidence level our results show that VaR calculation based on EGARCH model is adequate measure of downside risk.

In this study we compared the assessment of VaR obtained by historical simulation method and parametric methods. Before we approached the calculation of the value of VaR we structured optimal portfolio of financial institution using Markowitz's modern portfolio theory, which is the most widely used and accepted model for determining the basic policy of investment in securities, portfolio composing, and mitigation of risks.

The main objective of this study was to determine the adequacy of different types of VaR methods for measuring market risks in Serbian financial market, where the value of VaR is calculated using historical and parametric methods as well as backtesting analysis used to verify the adequacy of these models.

The paper is structured as follows. In the second chapter two approaches often used to measure VaR are reviewed. In the third chapter methodology of backtesting is reviewed. Results of empirical analysis as well as results of backtesting are presented in the fourth chapter. Concluding remarks are given in the fourth chapter.

1. Methodological framework

1.1. Defining the concept of value at risk (VaR)

VaR is a measure that gives the maximum loss that can be realized from certain investments over a given time horizon (usually 1 day or 10 days), with a certain probability (most of this chapter is based on Jorion, 2001). Mathematically, VaR for the period of the $k$ day in day $t$ can be represented as follows:

$$P(P_t - P_{t-k} \leq \text{VaR}(t, \alpha)) = 1 - \alpha$$  \hspace{1cm} (1)

where $P_t$ is the price of a particular type of financial asset, and $\alpha$ represent a given level of probability.
VaR can be expressed in terms of a percentile of the return distributions. Specifically, if \( q_\alpha \) is the \( \alpha \) th percentile of the continuously compound return, VaR is calculated as follows:

\[
VaR(t, k, \alpha) = \left( e^{\eta_\alpha} - 1 \right) p_{t-k}
\]  

(2)

Previous equation implies that a good estimate of VaR can only be produced with accurate forecast of the percentiles, \( q_\alpha \), which is obtained on the corresponding volatility modeling. Therefore, below we discuss the value of VaR for a series of returns.

Define a one-day return on day \( t \) as:

\[
\eta_t = \log(P_t) - \log(P_{t-1})
\]  

(3)

For the time series of return \( rt \), VaR can be expressed as:

\[
P(\eta_t < VaR_t | I_{t-1}) = \alpha
\]  

(4)

From this equation it follows that finding the VaR values is the same as finding a 100\( \alpha \)% conditional quantiles. Formally, it is possible to develop models for the stock returns \( \eta_t \) as follows:

\[
\eta_t = \mu_t + \epsilon_t, \quad \epsilon_t = \alpha_t \eta_{t-1}, \quad \mu_t = \mu(I_{t-1}; \theta), \quad \sigma_t^2 = \sigma^2(I_{t-1}; \theta)
\]  

(5)

where \( I_{t-1} \) is a set of information available at time \( t-1 \), and where \( \mu \) and \( \sigma \) are functions of a certain dimensional vector of parameter values \( \theta \). In this model \( \epsilon_t \) is innovation, \( \sigma_t \) is the unobserved volatility, and \( \eta_t \) is the martingale difference sequence satisfying:

\[
E(\eta_t | I_{t-1}; \theta) = 0, \quad V(\eta_t | I_{t-1}; \theta) = 1
\]  

(6)

As a consequence, we have:

\[
E(\epsilon_t | I_{t-1}; \theta) = \eta_t, \quad V(\epsilon_t | I_{t-1}; \theta) = \sigma_t^2, \quad \eta_t | I_{t-1} \sim \mathcal{N}(0, \sigma_t^2)
\]  

(7)

where \( \mathcal{D}(0, \sigma_t^2) \) represents the conditional distribution with zero mean value and variance \( \sigma_t^2 \).

If the return can be modeled by a parametric distribution, VaR can be derived from the distributional parameters. Unconditioned parametric models were determined with \( \mu_t = \mu \) and \( \sigma_t = \sigma \). Therefore we assume that returns are independent and equally distributed with a given density function:

\[
f_r(x) = \frac{1}{\sigma} f_{\eta_t}(\frac{x - \mu}{\sigma})
\]  

(8)

where \( f_{\eta_t} \) is density function of distribution of \( \eta_t \) and \( f_r \) being density function of the standardized distribution of \( \eta_t \).

Below we present the most commonly used parametric models that enables VaR estimates, the exponentially weighted moving average model (EWMA) and the conditional volatility models (GARCH type models).
1.2. The exponentially weighted moving average model (EWMA)

Since the JP Morgan 1994th RiskMetrics model was developed to measure VaR, VaR calculated in this way becomes a benchmark measure of market risk in practice. The starting assumption of RiskMetrics model is that returns of a certain type of financial assets have a conditional normal distribution with arithmetic mean zero and variance, expressed as the value of the exponential weighted moving average historical rate of squared values of return. However, in practice it was confirmed that the distribution of returns of financial assets generally deviates from the normal, i.e. has heavier tails, so the assessments of VaR obtained by this model are biased. Second, in many empirical studies (see for example Ding et al., 1993; So, 2000) it was observed that returns of different types of financial assets are characterized by long memory, which is reflected in the assessment and prediction of market volatility.

RiskMetrics VaR model evaluation assumes a dynamic model of exponentially weighted moving average (EWMA) of the variance:

\[
\sigma_t^2 = \lambda \sigma_{t-1}^2 + (1 - \lambda)(r_t - \mu)^2
\]

In order to initialize a recursive equation of variance, the sampling variance is used:

\[
\sigma_s^2 = \frac{1}{n-1} \sum_{t=1}^{n} (r_t - \mu)^2
\]

where, following RiskMetriks system, the value of the parameter \( \lambda \) is 0.94 for daily data and 0.97 for monthly data. The parameter \( \lambda \) is called a smoothing parameter which determines the exponentially declining weighting scheme of the observations. The smaller \( \lambda \), the greater the weight is given to recent return data. Exponentially weighted moving average model can be represented as:

\[
\sigma_t^2 = \sum_{i=1}^{\infty} \lambda^i \sigma_{t-i}^2
\]

If it is assumed that the conditional distribution of returns is normal with mean value zero and variance \( \sigma_t^2 \), then the one-day VaR on day \( t \) is obtained as follows:

\[
\text{VaR}_t = \mu + z_{\alpha} \sigma_t = \mu + \Phi^{-1}(\alpha) \sigma_t
\]

where \( z_{\alpha} \) is 100\( \alpha \) percent of \( N(0,1) \), respectively \( \Phi^{-1}(\alpha) \) is the inverse distribution function of standardized normal random variable.

However, if returns are characterized by Student's t distribution with mean value zero, then the value of one-day VaR is calculated:

\[
\text{VaR}_t = \mu + s_{\alpha,v} \sigma_t = \mu + t_{\alpha,v}^{-1}(\alpha) \sqrt{\frac{\nu}{\nu}} \sigma_t
\]

where \( s_{\alpha,v} \) being left quintile at \( \alpha \% \) and \( t \) being the distribution function for the Student's t distribution with the estimated number of degrees of freedom \( v \).
1.3. GARCH type models

The GARCH type of models successfully captures several characteristics of financial time series, such as thick tailed returns and volatility clustering (Tsay, 2010). This type of models represents standard and very often used approach for getting VaR estimate. A general GARCH (p,q) model proposed by Bollerslev (1986) can be written in the following form:

\[
y_t = \alpha_0 + \sum_{i=1}^{p} \alpha_i y_{t-i} + \epsilon_t - \sum_{j=1}^{q} \beta_j \epsilon_{t-j}
\]

(14)

\[
\epsilon_t = \sigma_t \epsilon_t \sim \mathcal{N}(0, \sigma_t^2),
\]

(15)

\[
\sigma_t^2 = \alpha_0 + \sum_{i=1}^{p} \alpha_i \epsilon_{t-i}^2 + \sum_{j=1}^{q} \beta_j \sigma_{t-j}^2,
\]

\[
\alpha_0 > 0, \alpha_i \geq 0, \beta_j \geq 0
\]

The first equation actually describes the percentage level of return, \( y_t = \frac{100}{100} + \frac{100}{100} \), which is presented in the form of autoregressive and moving average terms, i.e. ARMA(m,n) process. Error term \( \epsilon_t \) in the first equation is a function of \( \epsilon_t \), which is random component with the properties of white noise. The third equation describes the conditional variance of return \( \sigma_t^2 \), which is function of \( \epsilon_t^2 \) of q previous periods and conditional variance of p previous periods. The stationarity condition for GARCH (p,q) is \( \sum_{i=1}^{p} \alpha_i + \sum_{j=1}^{q} \beta_j < 1 \).

In many applications with high frequency financial data the estimate for \( \sigma_t^2 \) turns out to be very close to unity. This provides an empirical motivation for the so-called integrated GARCH(p,q), or IGARCH(p,q), model (see Bollerslev et al. (1994)). In the IGARCH class of models the autoregressive polynomial in previous equation has a unit root, and consequently a shock to the conditional variance is persistent in the sense that it remains important for future forecasts of all horizons. A general IGARCH (p,q) process can be written in the following form:

\[
\sigma_t^2 = \alpha_0 + A(L)\epsilon_t^2 + B(L)\sigma_{t-L}^2, A(L) + B(L) = 1
\]

(16)

where \( A(L) \) and \( B(L) \) are lag operators.

In order to capture asymmetry Nelson (1991) proposed exponential GARCH process or EGARCH for the conditional variance:

\[
\log(\sigma_t^2) = \alpha_0 \sum_{i=0}^{\infty} \gamma_i g(\frac{\epsilon_t}{\sigma_t})
\]

(17)

Asymmetric relation between returns and volatility change is given as function \( g(\frac{\epsilon_t}{\sigma_t}) \), which represent linear combination of \( \epsilon_t/\sigma_t \) and \( \epsilon_t/\sigma_t \):

\[
g(\frac{\epsilon_t}{\sigma_t}) = \theta \left( \frac{\epsilon_t}{\sigma_t} - \frac{\epsilon_t}{\sigma_t} \right) + \gamma \left( \frac{\epsilon_t}{\sigma_t} \right)
\]

(18)

where \( \theta \) and \( \gamma \) are constants.

By construction, equation is a zero mean process (bearing in mind that \( \epsilon_t = \epsilon_t/\sigma_t \)). For 0 < \( \epsilon_t < \infty \), \( g(\epsilon_t) \), is linear function with slope coefficient \( \theta + \gamma \), while for \( -\infty < \epsilon_t \leq 0 \) it is linear function with slope coefficient \( \gamma - \theta \). First part of equation, \( \theta (|\epsilon_t| - E(\epsilon_t)) \), captures the size effect, while second part, \( \gamma (\epsilon_t) \), captures the leverage effect.
Zakoian (1990) proposed TGARCH (p,q) model as alternative to EGARCH process, where asymmetry of positive and negative innovations is incorporated in the model by using indicator function:

$$\sigma_t^2 = \alpha_0 + \sum_{j=1}^{q} [\alpha_j e_{t-j}^2 + \gamma_j \sigma_{t-j}^2] + \sum_{j=0}^{p} \beta_j \sigma_{t-j}^2, \quad (19)$$

where \(\gamma_j\) are parameters that have to be estimated, \(d(\cdot)\) denotes the indicator function defined as:

$$d(e_{t-1} < 0) = \begin{cases} 1, & e_{t-1} < 0 \\ 0, & e_{t-1} \geq 0 \end{cases} \quad (20)$$

TGARCH model allows good news, \(e_{t-1} > 0\), and bad news, \(e_{t-1} < 0\), to have differential effects on the conditional variance. For instance, in the case of TGARCH (1,1) process, good news has an impact of \(\alpha_1\), while bad news has an impact of \(\alpha_1 + \gamma_1\). For \(\gamma_1 > 0\), the leverage effect exists.

APARCH (p, q) process, proposed by Ding, Granger and Engle (1993), includes seven different GARCH type models (ARCH, GARCH, AGARCH, TARCH, NGARCH and Log-GARCH):

$$\sigma_t^2 = \alpha_0 + \sum_{j=1}^{q} [\alpha_j (e_{t-j} - \gamma_j e_{t-j})^2 + \sum_{j=0}^{p} \beta_j \sigma_{t-j}^2], \quad (21)$$

where \(\alpha_0 > 0, \gamma_j \geq 0, \beta_j > 0, j = 1, \ldots, p, \alpha_j \geq 0, s = 1, 2, \gamma_1 < 1, \) and \(i = 1, \ldots, q\).

Parameter \(\delta\) in the equation denotes exponent of conditional standard deviation, while parameter \(\gamma\) describes asymmetry effect of good and bad news on conditional volatility. Positive value of \(\gamma\) means that negative shocks from previous period have higher impact on current level of volatility, and otherwise.

Based on estimated parameters of GARCH type process, it is possible to make forecast of \(\hat{y}_n(k)\) and conditional volatility \(\hat{\sigma}_n(k)\) for next \(k\) periods [for details see Mladenović et al. (2006)]. Forecasted value of return and the conditional volatility for the next period is obtained as follows:

$$\hat{y}_{n+1}(1) = \alpha_0 + \sum_{j=1}^{q} \alpha_j y_{n+1-j} + e_t - \sum_{j=1}^{p} \beta_j e_{n+1-j} \quad (22)$$

$$\hat{\sigma}_n^2(1) = \alpha_0 + \sum_{j=1}^{q} \alpha_j \hat{y}_{n+1-j}^2 + \sum_{j=1}^{p} \beta_j \sigma_{n+1-j}^2. \quad (23)$$

If residuals \(e_t\) follow standardized normal distribution, VaR at 95% confidence level could be calculated as:

$$\hat{\sigma}_n^2(1),$$

while if residuals \(e_t\) follow standardized \(t\) distribution with \(\nu\) degrees of freedom, then VaR could be calculated as:

$$\hat{y}_n(1) - t^{\frac{\nu - 2}{\nu}} \hat{\sigma}_n^2(1). \quad (24)$$
1.4 Historical Simulations Model

Historical model calculation of VaR does not use the assumption of certain types of distributions, but uses actual data from the past (Barone-Adesi, Giannopoulos 2001). The main advantage of historical simulation is non-parametrical or non-existence of assumptions regarding the distribution of portfolio returns as this model seems appropriate for inefficient markets. Historical simulation is based on the assumption that the returns are independently and identically distributed. IID assumption is based on the theory that the returns are periodically mutually uncorrelated which means that the return of one period does not depend on the return of the previous period. This assumption is consistent with the theory of market efficiency, where the present price of securities reflects all information relevant to the price of those securities. If price changes depend only on the new information, which means that it can not be predicted and therefore it will be time uncorrelated (Neftci, 2004).

There are several ways in which VaR can be calculating using historical simulation of the basic principle. The first step in carrying out historical simulation is the collection of sufficient historical data on gains and losses or returns for portfolios that are going to be used in order to conduct historical simulations.

Considered portfolio which is made up of \(N\) securities, and for each security there are observations for each of the \(n\) periods (e.g. days) in the historical sample, it will have a simulating return in period \(t\):

\[
\text{Return}_t = \sum_{i=1}^{n} W_i R_{i,t}
\]

where: \(W_i\)-share in assets currently invested in securities and, \(R_{i,t}\)-return on security \(i\) during the period \(t\).

Previous formula gives the simulated historical series of returns for the portfolio and thus serves as a basis to calculate the VaR using historical simulation. The resulting series returns will differ from the actual return earned on the portfolio because the actual composition of the portfolio changes over time. Simulated historical returns represent returns that portfolio achieved if the investor has changed his portfolio at the end of each working day in a manner to ensure that each of securities always have the same relative share of the portfolio.

The obtained returns are applied to the histogram and from the histogram the value VaR for a desired level of risk is read. Depending on the desired level of risk, the \(n\)-th greatest loss is taken for the value of VaR with the predetermined probability.

In applying the historical method to calculate the VaR in emerging markets and economies that are in transition, a significant limitation is the length of time-series data that is available. This problem is particularly acute in countries with a short history of the market economy, where securities are not listed on stock exchange long enough to be able to calculate the VaR for long periods of time.

Empirical studies have shown that series of portfolio shares on the capital market are characterized by the existence of heteroscedasticity and autocorrelation between returns (Radivojević et al., 2010). The assumption that returns are independently and identically distributed is unrealistic due to the fact that volatility varies depending on time and that the time periods are grouped by high and low volatility. Because of these shortcomings of the standard historical simulation approach developed are weighted models that in different ways process the returns in order to remove autoregression and serial correlation between variables and transferred them into independent and equally distributed returns. The most famous modifications of historical simulation include time weighted model and volatility weighted model.
Time weighted model was developed by Boudoukh, Richardson and Whitlaw (1998). This model of historical simulation by observed returns from recent past gives relatively high weights that decline exponentially over time, and their sum is 1.

\[ \sum_{i=1}^{N} w_{i} = 1 \]

(26)

where; \( w_{i} \) portfolio returns in period \( i \) and \( \lambda \) is the decay factor.

Exponential weighting is done in such a way that the exponential decay factor \( \lambda \) assigns a value between 0 and 1, and \( w(1) \) is the weight of recent historical portfolio return. Observation that precedes the new observation will get the latest factor \( w(2) \), which is \( w(2) = \lambda \times w(1) \). Third return will get the weight \( \lambda^2 \times w(1) \), and so on until the nth number of observations. Once the weights are assigned to the observed returns the value of VaR is calculated using the empirical distribution of returns adjusted for the assigned weights (Boudoukh, Richardson, Whitlaw, 1998).

Volatility weighted model is developed by Hull and White (1998). The basic idea was to adjust the changes of volatility in historical returns which occurred in the recent past. To predict the VaR for day \( t \) the most important return is used \( r_{i,t-1} \), and conditional volatility \( \sigma_{t,i} \), obtained through EWMA or GARCH method. The obtained amount of anticipated volatility at time \( t \), \( \sigma_{t,i} \), represents a multiplier with which historical returns \( r_{i,t} \) are multiplied with at time \( t \) and weighted with the necessary volatility analyzed by EWMA or GARCH method in time \( t \) (Hull, White 1998).

\[ r_{i,t}^\sigma = \sigma_{t,i} \times \frac{r_{i,t}}{\sigma_{t,i}} \]

(27)

where; \( r_{i,t}^\sigma \) is weighted volatility return.

Weighting the returns in this way historical losses are increasing or decreasing depending on the current market volatility. In order to assemble a histogram of historical return volatility weights are used instead of the actual returns. In order to account for the accumulation of volatility in forecasting future volatility is useful to use the EWMA or GARCH models, given that both models consider the current variance as a function of the previous square variance of past returns.

2. Backtesting

Backtesting represents a statistical procedure by which losses and gains are systematically compared to the appropriate valuation of VaR. In the backtesting process it can be statistically examined if the frequency exceptions, during the selected time interval, are in accordance with the chosen confidence level. These types of tests are known as tests of unconditional coverage. The most famous test in this group is the Kupiec test.

In theory, however, a good VaR model not only shows the correct amount of exceptions, but exceptions that have been evenly distributed over time, i.e. that are independent from each other. Grouping of exemptions indicate that the model does not register changes in the market volatility and correlation in the correct manner. Conditional coverage test, therefore, examines conditionality and changes in data over time (Jorion 2001). The most commonly used test of this group is the Christoffersen independence test.
2.1. The Kupiec test

The Kupiec test, known as the proportions of failures test (POF), measures whether the number of exemptions is consistent with a given confidence level (Jorion 2001). If the null hypothesis is true, then the number of exemptions follows the binomial distribution. Therefore, to implement the POF test it is necessary to know the number of observations \( n \), the number of exceptions \( x \) and confidence level.

The null hypothesis of the POF test is:

\[
H_0: p = \frac{x}{n}
\]

The basic idea is to determine if the observed excess rate \( \hat{p} \) is significantly different from \( p \), excess rate determined by the given confidence level. According to Kupiec (1995) POF test is best implemented as a likelihood-ratio test (LR). The statistical test has the following form:

\[
LR_{POF} = -2 \ln \left( \frac{(1-p)^{x-n+1}p^{n-x+1}}{(1-\widehat{p})^{x-n+1}(\widehat{p})^{n-x+1}} \right)
\]  

(28)

If the null hypothesis is correct, \( LR_{POF} \) statistics in asymptotic conditions has \( \chi^2 \) distribution with a single degree of freedom. If the value of \( LR_{POF} \) statistics exceeds the critical value of \( \chi^2 \) distribution, the null hypothesis is rejected and the model is considered to be imprecise.

2.2. The Christoffersen independence test

Christoffersen (1998) uses the same idea of the credibility test as Kupiec, but extends the test by introducing separate statistical values for independent exceptions. In addition, this test observes if the probability of exceptions on any day depends on the outcome of the previous day.

Let \( n_{ij} \) be defined as the number of days when an outcome \( j \) occurs assuming that event \( i \) occurred on the previous day. Besides that, let \( \pi_i \) represents probability of observing an exception conditional on state \( i \) on the previous day (Nieppola, 2009):

\[
\pi_0 = \frac{n_{11}}{n_{22} + n_{21}}, \pi_1 = \frac{n_{21}}{n_{22} + n_{11}}, \pi_L = \frac{n_{21} + n_{11}}{n_{22} + n_{11} + n_{21} + n_{12}}
\]  

(29)

If the model is correct, the exception that occurs today should not depend on exception that occurred on the previous day. In other words, if the null hypothesis is true, probabilities \( \pi_0 \) and \( \pi_L \) should be equal.

Independence test of the exceptions is best implemented as a likelihood-ratio test (LR). The statistical test has the following form:

\[
LR_{ind} = -2 \ln \left( \frac{(1-p)^{x-n+1}p^{n-x+1}}{(1-\pi_0)^{x-n+1}(\pi_0)^{n-x+1}} \right)
\]  

(30)

\( LR_{ind} \) also has asymptotically \( \chi^2 \) distribution with one degree of freedom. If the value \( LR_{ind} \) is lower than the appropriate critical value of the \( \chi^2 \) distribution, the model passes the test. On the contrary, the value of \( LR_{ind} \) statistic greater than the critical value implies that the model is rejected.
3. Empirical Analysis

The first step of the empirical analysis examines the characteristics of stocks that are continuously traded on the BSE, and that constitute the index Belex-15. This study used a sample time series of daily rates of return of these stocks for the period of 18.10.2005 - 21.10.2011.

The next step in the empirical analysis is measuring of market risk by analytical and historical VaR model. Backtesting analysis based on Kupiec and Christoffersen test was conducted for comparison of VaR estimates with actual values of returns.

During the construction of the portfolio, we applied the Markowitz theory of optimal portfolio choice. Comparing the features and characteristics of the optimal portfolio and BELEX-15, including the measurement of market risk through VaR, we tested the adequacy of the application of modern portfolio theory. According to Markowitz the optimal portfolio theory stocks that have the most optimal combination of expected return and standard deviation should be chosen (higher expected return and a lower standard deviation, the greater the expected return and the same standard deviation or the same expected return and a lower standard deviation (Markowitz 1959) This means that in the optimal portfolio, stocks that have the lowest coefficient of variation should be chosen. By applying the mentioned criteria the optimal portfolio is made up of following stocks: Veterinarski zavod Subotica (VZAS), Tehnogas (TGAS), Imlek (IMLK), Aik banka (AIKB).

Comparing the statistical characteristics of the optimal portfolio under the assumption of equal participation of selected stocks in the portfolio with Belex-15 stock index, one can conclude the following:

— accumulation of volatility observed in the case of both series (which can be seen from the graph – Fig. 1);
— correlogram and Ljung-Box statistics for residuals and square values of residuals indicate the existence of autocorrelation of returns in the case of the two series, which implies that the value of return in one period depends on the actual return values in the previous period;
— distribution of rates of return of both series deviates from the normal, elongated, which means that it has heavier tails and more likely to exercise extreme return values (Fig. 2 and 3). Indication of kurtosis in the case of both analyzed a series of more than three, which shows that if the realized profit / loss, it is higher than in the case of stocks whose rates of return are normally distributed. Kurtosis is higher than normal, which is usual characteristics of financial series. This is indicated by the Jarque-Bera test which value suggests rejection of the null hypothesis, which assumes a normal distribution. The standard deviations of both series of returns are extremely high, especially when compared with an average rate of return.

The average rate of return of the optimal portfolio for the analysed period was positive, although very low, unlike Belex-15 index, which is the negative. Also, the return distribution of optimal portfolio is closer to the normal distribution, i.e. has a lower coefficient of skewness (closer to 0) and a lower coefficient of kurtosis (closer to 3). Therefore, all indicators with the exception suggest that standard deviation of the optimal portfolio has a better performance than the index Belex-15.

At the risk of 1% ARCH - LM test indicates the presence of ARCH effects for both series of returns (the results of this test are shown in Table 1).
Fig. 1: Rates of returns of the optimal portfolio and Belex-15 index

![Graph showing rates of returns of the optimal portfolio and Belex-15 index]

Series: OPTIMALNIPORTFOLIO
Sample 1 1600
Observations 1514
Mean 0.000249
Median -0.000232
Maximum 0.150296
Minimum -0.112556
Std. Dev. 0.020617
Skewness 0.298680
Kurtosis 9.521766
Jarque-Bera 2705.661
Probability 0.000000

Fig. 2: Statistical characteristics of the optimal portfolio returns

![Histogram showing statistical characteristics of the optimal portfolio returns]

Series: RBELEX15
Sample 1 1600
Observations 1514
Mean -0.000284
Median -0.000285
Maximum 0.129275
Minimum -0.102923
Std. Dev. 0.016525
Skewness 0.444154
Kurtosis 13.59035
Jarque-Bera 7124.919
Probability 0.000000

Fig. 3: Statistical characteristics of the Belex-15 index returns

![Histogram showing statistical characteristics of the Belex-15 index returns]
Table 1: ARCH – LM return test of the optimal portfolio Belex 15 index

<table>
<thead>
<tr>
<th></th>
<th>OPTIMAL PORTFOLIO</th>
<th>BELEX15</th>
</tr>
</thead>
<tbody>
<tr>
<td>F STATISTIC</td>
<td>197,8577 (0,000)</td>
<td>140,0955 (0,000)</td>
</tr>
<tr>
<td>N*R²</td>
<td>175,1806 (0,000)</td>
<td>128,3781 (0,000)</td>
</tr>
</tbody>
</table>

Source: Author’s calculations.

Since the optimal portfolio gives higher returns and is less likely to generate greater losses, we started measuring the market risk for the optimal portfolio using historical simulation and parametric VaR model that assumes a normal distribution, as well as using GARCH methodology, assuming that residuals followed by Student's t distribution.

Parametric VaR measurement method, which assumes a normal distribution of returns requires knowledge of the mean value, the returns and their variance and covariance matrix, which is estimated by two different approaches: with equal weights (EW) and the method of exponentially weighted moving average (EWMA).

The observed period of holding a portfolio is one-day and ten-day. For liquid markets adequate evaluation of the VaR is one day due to the constantly changing of the prices, while Basel I recommends ten day (Basel Committee on Banking Supervision, 1996). VaR values are given for two intervals of confidence - 95% and 99%.

The results of the analysis using parametric VaR can be interpreted as follows: in 95% of cases not more than 3.21% of the portfolio value will be lost through the method of equal weights. In 95% of cases not more than 2.18%, will be lost if method of exponentially weighted moving average is applied (Table 2).

We notice that the method of exponentially weighted moving average gives lower values of risk in both cases. The main reason is that the method of exponentially weighted moving average assigns more weights to recent returns as well as our portfolio is exposed to lower volatility in recent times. It should be noted that the value of VaR using parametric method was calculated for $\lambda = 0.94$.

Table 2: Value of the parametric model VaR of the optimal portfolio

<table>
<thead>
<tr>
<th></th>
<th>Equal weights method</th>
<th>The method of exponentially weighted moving average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence level</td>
<td>1 day</td>
<td>10 days</td>
</tr>
<tr>
<td>95%</td>
<td>3.21%</td>
<td>10.16%</td>
</tr>
<tr>
<td>99%</td>
<td>4.54%</td>
<td>14.37%</td>
</tr>
</tbody>
</table>

Source: Author’s calculations.

In the next step, we used the GARCH methodology to assess the value of VaR. GARCH (1,1) model with assumption of a normal distribution and student t distribution has a satisfactory statistical properties. In the estimated model there is no presence of ARCH effects and autocorrelation in the squared values of residuals. Residuals of the estimated model, however still does not have a normal distribution, but the asymmetry and higher kurtosis of the distribution are less pronounced than in the portfolio. The presence of asymmetric effects is not observed. Series of returns of the optimal portfolio is best described by ARMA (2,1) specification, assuming normal distribution of residuals, or ARMA (1,1) specification assuming the student's t distribution.
Table 3: Parameter estimates of the GARCH model

<table>
<thead>
<tr>
<th></th>
<th>GARCH (1,1) Normal distribution</th>
<th>GARCH (1,1) Student’s t distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean equation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AR(1)</td>
<td>-0.608 (0.000)</td>
<td>0.503 (0.000)</td>
</tr>
<tr>
<td>AR(2)</td>
<td>0.176 (0.000)</td>
<td></td>
</tr>
<tr>
<td>MA(1)</td>
<td>0.745 (0.000)</td>
<td>-0.396 (0.000)</td>
</tr>
<tr>
<td><strong>Variance equation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>0.233 (0.000)</td>
<td>0.174 (0.000)</td>
</tr>
<tr>
<td>α</td>
<td>0.238 (0.000)</td>
<td>0.209 (0.000)</td>
</tr>
<tr>
<td>β</td>
<td>0.713 (0.000)</td>
<td>0.769 (0.000)</td>
</tr>
<tr>
<td><strong>Specification tests</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2(30)</td>
<td>32.747 (0.48)</td>
<td>30.216 (0.654)</td>
</tr>
<tr>
<td>ARCH (10)</td>
<td>5.07 (0.886)</td>
<td>6.09 (0.807)</td>
</tr>
</tbody>
</table>

Source: Author’s calculations.

Based on estimated parameters by GARCH type models we make forecast of returns and conditional volatility to obtain VaR estimates.

Table 4: VaR estimates based on GARCH models

<table>
<thead>
<tr>
<th></th>
<th>GARCH (1,1) Normal distribution</th>
<th>GARCH (1,1) Student’s t distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecast returns</td>
<td>0.542</td>
<td>-0.064</td>
</tr>
<tr>
<td>Forecast conditional variance</td>
<td>5.437</td>
<td>4.750</td>
</tr>
<tr>
<td>VaR (1, 0.95)</td>
<td>3.306</td>
<td>3.350</td>
</tr>
<tr>
<td>VaR (1, 0.99)</td>
<td>4.891</td>
<td>5.839</td>
</tr>
</tbody>
</table>

Source: Author’s calculations.

The maximum daily loss obtained by GARCH type models at 95% confidence level is about 3.3%.

We calculated the value of VaR using historical simulation. Historical method does not assume any type of return distribution. The only assumption is that the returns are independent and identically distributed. The main advantage in comparison with the previous method is the ability to customize the extreme values of return. Returns are sorted in a rising way starting from the largest negative values. We used the empirical distribution as a proxy true distribution generating returns and, finding returns that provide return with cumulative distribution function equal to 1 - a confidence interval. In order to find the true value of VaR, we used linear interpolation. In doing so, we assume that the weights of all the rates of return are equal, but that recent returns have higher weights.

Table 5: VaR estimates of the optimal portfolio based on historical simulation method

<table>
<thead>
<tr>
<th></th>
<th>The method of equal weights</th>
<th>The method of exponentially weighted moving average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence level</td>
<td>1 day</td>
<td>10 days</td>
</tr>
<tr>
<td>95%</td>
<td>2.71%</td>
<td>8.57%</td>
</tr>
<tr>
<td>99%</td>
<td>4.99%</td>
<td>15.80%</td>
</tr>
</tbody>
</table>

Source: Author’s calculations.
Compared with the parametric method at the 95% confidence level, value of VaR under the assumption of equal weights is smaller by the method of historical simulation, while at the 99% confidence level value of VaR is higher.

The results obtained by the method of historical simulation assuming equal weights suggest that in 95% of cases maximum daily loss is about 2.71% of the portfolio, and in 99% of cases maximum daily loss is about 4.99% of portfolio value (Table 5). Historical simulation method under the assumption that recent returns have higher weights gives a lower VaR estimate in relation to the assumption of equal weights, but higher mark than the parametric VaR assuming that recent returns have higher weights.

Backtesting VaR model performance analysis is carried out with the aim of comparing ex-ante VaR estimate the ex-post returns. This analysis was performed for the last 200 observations returns.

Based on the results of Kupiec's and Christoffersen's test (Table 6), it was observed that VaR estimates obtained by both, parametric and historical simulation, give a good prediction of market risk, at 95% and 99% confidence level.

<table>
<thead>
<tr>
<th>Test</th>
<th>Parametric method</th>
<th>Historical simulation method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EW</td>
<td>EWMA</td>
</tr>
<tr>
<td>Kupiec 95%</td>
<td>3.199</td>
<td>0</td>
</tr>
<tr>
<td>Kupiec 99%</td>
<td>0.619</td>
<td>3.208</td>
</tr>
<tr>
<td>Christoffersen 95%</td>
<td>0.26</td>
<td>1.06</td>
</tr>
<tr>
<td>Christoffersen 99%</td>
<td>0.01</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Source: Author's calculations. Note: Critical values of the test for the 95% and 99% confidence level are amounted to 3.84 and 6.635, respectively.

Table 7: Backtesting results of a parametric VaR using GARCH models

<table>
<thead>
<tr>
<th>Test</th>
<th>GARCH (1,1) Normal distribution</th>
<th>GARCH (1,1) Student’s t distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kupiec 95%</td>
<td>4.857*</td>
<td>4.857*</td>
</tr>
<tr>
<td>Kupiec 99%</td>
<td>0.619</td>
<td>4.020</td>
</tr>
<tr>
<td>Christoffersen 95%</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>Christoffersen 99%</td>
<td>0.01</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Source: Author’s calculations. Note: Critical values of the test for the 95% and 99% confidence level are amounted to 3.84 and 6.635, respectively.

Kupiec's test shows that the VaR score obtained by GARCH model is inadequate for the 95% confidence level and overestimate risk value, while with the 99% confidence level, this score gives good predictions of market risk. According to Christoffersen’s test VaR estimates obtained by GARCH type models are satisfactory even at the 95% confidence level.
Conclusion

The main objective of this analysis was the measurement of market risk for stocks that constitute the index Belex-15 on the basis of which the hypothetical optimal portfolio of financial institutions is constructed. The optimal portfolio is constructed of the following stocks: Veterinarski zavod Subotica (VZAS), Tehnogas (TGAS), Imlek (IMLK), Aik banka (AIKB).

Comparing the statistical characteristics of the optimal portfolio under the assumption of equal participation of selected stocks in the portfolio with Belex-15 stock index we can observe common characteristics such as the accumulation of volatility and the existence of autocorrelation. The standard deviations of both series of returns are extremely high, especially when compared with an average rate of return. The average rate of return for the observed period in the optimal portfolio is positive, although very low, unlike Belex-15 index, which is the negative. Also, the optimal portfolio distribution of return has a lower coefficient of skewness (closer to 0) and a lower coefficient of kurtosis (closer to 3). Therefore, all indicators of the descriptive statistics with the exception of the standard deviation suggests that the optimal portfolio has a better performance than the index Belex-15. At the risk of 1% ARCH - LM test indicates the presence of ARCH effects for both series of returns.

Since the optimal portfolio gives higher returns and is less likely to generate greater losses, we started measuring the market risk applying historical simulation VaR method, parametric VaR assuming a normal distribution, as well as using GARCH methodology, assuming that residuals follow Student's t distribution.

The empirical results show that parameter exponentially weighted moving average model gives lower values at risk in both cases (95% and 99%) due to the fact that this method assigns weights to more recent returns while our portfolio is exposed to a lower volatility in recent times.

In the case of application of GARCH methodology in assessing the value of VaR, GARCH (1,1) model with assumption of a normal distribution and student t distribution have satisfactory statistical properties. Series of returns of the optimal portfolio is best described by ARMA (2,1) specification, assuming normal distribution of residuals, or ARMA (1,1) specification assuming the student's t distribution. Results show that with the significance level of 95% this model gives higher values of VaR than in the case of exponentially weighted average method.

Backtesting VaR model performance analysis is carried out with the aim of comparing ex-ante VaR estimate the ex-post returns. Based on the results of Kupiec's and Christoffersen's test, it was observed that in the case of VaR obtained using parametric and historical simulation model at the 95% and 99% confidence level the observed models give a good prediction of market risk.

The research results may have important implications for investors and risk managers who operate in the turbulent markets of developing countries. However, the main limitation of this study is that empirical research referred to only Serbian capital market so that its results cannot be generalized to other emerging markets.

In the future research we will try to overcome these limitations by using a larger sample of returns at the capital markets of new EU member states and accession countries to join the EU, which represent an attractive market for foreign investors.
References


AUTHOR GUIDELINES FOR IR

General outline:
Authors submitting to the International Review are requested to email full paper in English. Pictures, if imported, should be placed separately in the zip file in TIFF, JPG, GIF or CDR format in resolution of 300 dpi.

Manuscripts are blind reviewed with the understanding that they are substantially new and have not been previously published in whole. Publisher has the copyright to all published articles.

Practical guidelines

1) The length of the manuscript should not exceed 8 pages (including notes, references, appendices, tables, figures, charts, etc.). A paper must be written in English in text processor Microsoft Word, using font Palatino Linotype (size 11), in Latin alphabet, single spacing.
2) Page setup: B5, margins: top 3 cm; bottom 2,5 cm; left 2,5 cm; right 2,5 cm.
3) Paragraph setup: first line indentation 0,6 cm, paragraph spacing: before 2 pt and after 2 pt.
4) Title: right, bold, size 16
5) The author's name: last, middle and first name (bold, size 11) without titles. The author's affiliation name of institution, city, state, and country should be together with the author's name. Behind the name of the first author, a footnote should be inserted containing address and email of the first author. The maximum number of authors of one paper is three.
6) Abstract: italic, size 11, 3 line behind the author's name, the maximum length of 250 words. Key words should be 1 line behind the abstract up to ten key words.
7) Avoid endnotes.
8) Tables and figures should be numbered (1,2,3 etc.), in italics centred. All tables and figures (drawings) must be black & white.
9) Structure of the manuscript (only two levels). First heading: left, bold, size 12, before 18 after 9 pt. Second heading: left indentation 0,6 cm, bold, size 12, before 12 after 6 pt.
10) Reference to articles and books in the text: Give full name (first name, middle initial, and last name) of author(s) and year of publication in the first citation, with page number(s) where appropriate. For example: Glenn Firebaugh (1999) [first reference]; Firebaugh (1999) [subsequently]; Andrea Boltho and Gianni Toniolo (1999) [first reference], Boltho and Toniolo (1999) *subsequently+; Albert Berry, François Bourguignon, and Christian Morrisson (1983) [first reference], Berry, Bourguignon, and Morrisson (1983) [subsequently]. When more than one work by the same author is cited, give the last name of author and year of publication in parentheses for each subsequent citation. When listing a string of references within the text, arrange first in chronological order, then alphabetically within years. If there are four or more authors, refer to the first author, followed by et al. and the year; for example: Stefan Fölster et al. (1998). If there is more than one publication referred to in the same year by the author(s), use the year and a, b, etc. (example: 1997a, b). References to authors in the text must exactly match those in the Reference section.
11) List of references (in alphabetical order by author's last names) should be at the end of the manu. JR uses AEA rules for references (Harward style).


*Article history:*
- Received 19 August 2013
- Accepted 10 February 2014