# Strategic management

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# Innovativeness as a Source of Competitive Advantage for Entrepreneurial Ventures and Small Business

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**Abstract**
Competitive advantage lies in the mindset of the specifics of an organization that make it different than other primarily because of the way of meeting the needs of customers / clients, which results in a generally greater impact. The aim is not only to gain a competitive advantage rather than aim to make it sustainable competitive advantage, because it is very complex to mimic, at a time when competition is trying to take over the business model. The most stable and long-term source of sustainable competitive advantage is innovation in business. However, innovation is the basic and exclusive peculiarity of entrepreneurial ventures and small businesses. The above assertion is based on J. Schumpeter, who said that entrepreneurs are primarily innovators that create the conditions for profit by creating a temporary monopoly by means of organizational and technological innovation. With their proactive approach, they constantly disturb the existing state of equilibrium (creative destruction) that favoured existing business actors forcing them to respond to emerging threats, while in return they provide business opportunities through new market space.
The main intention of the paper, i.e. its objective, is reflected in the determination of the degree of interdependence of innovative entrepreneurial ventures, with different levels of maturity, and business success, starting from basic research assumptions (hypotheses) to a higher level of innovation which means business success observed in the level of development of the enterprise.
Set research intentions will be implemented by means of quantitative analysis, using the appropriate mathematical and statistical procedures (Pearson's correlation) conditioned by the nature of available databases based on the GEM methodology and comparison of global capabilities.

**Keywords**
Innovativeness, competitive advantage, entrepreneurial ventures, small business, GEM methodology.

## Introduction

We are often witnesses of the statement that entrepreneurs are the drivers of technological development, social progress and economic growth. Something like this is deduced based on very successful high-tech companies, which started up within the framework of small entrepreneurship initiatives and achieved high growth rates. In accordance with this, most research into this topic aimed to establish the success of innovation and their contribution to the overall success of enterprises in their entirety. Regardless of a multitude of differences in attitudes regarding the above posed questions, a multitude of studies and research overlaps in one segment of critical significance, which is reflected in the individual responsible for initiating innovation, known as the entrepreneur. Of course, adequacy and motivation of the key individual are not enough; what is also essential are other elements of business success such as key managerial activities and attitudes,

development of appropriate market orientation and timely response to changes in the environment and the specific industry.

The most relevant manifestation of business success is expressed by competitive position as the relative strength of organizational resources and achieved results in comparison with other participants aiming to satisfy the same users' needs within a defined market space.

The basic purpose of this paper is to attempt to establish the interdependence of innovative activities in terms of volume and results and the business success of entrepreneurial ventures and small enterprises. The achieved level of maturity in the form of different stages of the entrepreneurial process represents the indicator of success in the form of survival, which, in the relative sense, features as the basic indicator of competitiveness. The choice of survival as a measure of success in the absolute sense or competitive strength of the business endeavour is explained in the relative sense by a significant difference emerging due to the existence or non-existence of strategic orientation in the business venture, which is the basic difference between an entrepreneurial venture and a small enterprise. This difference is significant, in view of the fact that it determines the innovate potential of business operation through the allocation of resources depending on the strategic orientation.

Also, based on available data, selected methodology and applied analysis, expectations are also present in the sense that more mature stages of business operation, viewed through stages in the development of the entrepreneurial process, also manifest a larger volume of innovative activities and results.

## 1. Theoretical basis of the article – innovativeness of entrepreneurial ventures as the base of success and competitiveness

The importance of innovativeness is well-known in academic, business, social and political segments of the environment. Consequently, innovation is identified as the basic prerequisite of economic growth and critical segment in competitive relationship, whether at the level of enterprise or national economy. If we use the language of specific data, then over 60% of the total economic growth belongs to technological improvement in comparison with improvement based on labour productivity (Freeman & Soete, 1997).

Thus, innovation becomes a critical factor as a basic constructive element of organizational resources in the aspiration to achieve business success.

Innovative endeavours include activities such as research, experimenting and development of new technologies, new products and/or services, new production processes, and new organizational structures. New materials of high-technology and information industries emerge as the basic consequences of these endeavours. A new management approach in business agrees with the fact that that information is the result of development of knowledge and base for future business results which are based on the significant distinction in relation to the current offer of the market and creator of new business competitiveness. Strategic management related to building and structuring the organization's resources predetermines the enterprise's potential pertaining to innovative ability. So, we argue unequivocally that innovation is the sole consequence of intangible part of the structure of resources, that is, knowledge and employees who have this knowledge and thereby constitute the organization's intellectual capital. Thus investment in knowledge becomes an essential prerequisite and an increasingly dominant method of investment, resulting in the development of new knowledge, and thereby the expansion of business opportunities and existing markets.

To achieve better results, innovative activities need to be strategically combined with competitive orientation. This combination is conditioned to the greatest extent by the highest level of individual knowledge and available technological basis. Aware of these circumstances, many organizations take into account that new technologies and management approach changes the traditional perspective of managing intellectual resources. Numerous articles in this area (Harari, 1994; Nonaka, 1994; West, 1992) argue that organizations that are able to stimulate and enhance the knowledge of staff, that is, human capital, are far more ready for the nature of current intensive change, and innovative activities in areas where they want to invest and be competitive.

The managers' essential obligation is reflected in finding and selecting human capital, but also in providing a level of motivation so as to provide support in the form of creative suggestions, various suggestions and research activities which will result in innovation. Thus the overall competitiveness in business operations that is based on inno-

vation unmistakeably and strongly results in a successful business strategy (Gatignon & Robertson, 1993). Some enterprises unequivocally find that innovation endeavour and adjustment to new procedures and new technologies significantly increase competiveness (Goel & Rich, 1997), for the following reasons: innovations can become investors only if they are able to manage research and development activities; when entrepreneurs, owners and managers can assess the expected values of the selected market segments, and if the basis of the enterprise's competitiveness comprises intangible resource, that is, intellectual capital.

### 1.1. The role of entrepreneurial ventures and small enterprises in the innovation process

When the topic of innovation is mentioned, a special place and role are taken up by small enterprises and entrepreneurial ventures due to a noted participation in the innovation process, viewed generally, and especially when it comes to technological changes. Although it is an officially adopted opinion that there is no optimum enterprise size which is practically predisposed for generating innovation at the maximum level, the usual intuitive assessment and analysis of research so far confirm that small enterprises significantly differ and play an important role in this process (Storey & Sykes, 1996). Numerous reports in this area confirm the potential of dedicated entrepreneurs included in innovation and technological improvements. The entrepreneurs' contribution does not end, and they tirelessly and tenaciously continue their engagement in the subsequent stages of the innovation process, which is also reflected in the effort to successfully transfer technology pursuing the commercialization and realized economic benefits. In addition, it is necessary to state that fundamental or radical interventions occur in large enterprises or large public research centres, whereas small enterprises are disproportionately responsible for development that occurs directly on the market, and for initial market diffusion. Undoubtedly, this role of small enterprises achieves unique advantages pertaining to absence of bureaucracy, efficient and intensive informal communication, and the flexibility and adaptability through the vicinity of the market. But, on the contrary, we can also encounter numerous obstacles related to the innovativeness of small enterprises, such as lack of technically qualified workforce, insufficient utilization of external information and advisory services, inadequate management, problems in securing finance and high costs of the regulatory environment. Generally, the basic advantage of small enterprises in the innovation process is reflected in appropriate response and behaviour, while the basic limitation is related to the issue of resources.

Thus, the nature, structure and quality of managerial and entrepreneurial knowledge and skills is key to innovation and success of any enterprise, regardless of its size, whereas achievement is also defined and measures in terms of growth in sales, assets, profits, products and services, employment and survival, especially when it comes to enterprises in the phase of entrepreneurial initiatives, ventures, and emergence. In many aspects, the relationship between management quality and business success is far more manifest and more often present in small enterprises than in large ones. In small enterprises, strategic and operative decisions are made by owners, entrepreneurs and key decisions are formulated and implemented much faster, whereas the obstacles and operationalisation by the subordinates are far less present in comparison with large enterprises, as far as all of the above is concerned. Decisions made and carried out by small enterprises may be professional and well founded, but they can also have numerous unusual outcomes in terms of market position, primarily due to limited market poser, limited resources and lack of location (Beaver & Jennings, 2000). Due to such specific features, it is justified to point out that small enterprises are not mere miniatures of large ones.

### 1.2. Determinants of success and competitiveness

If we are acquainted with the fact that each owner/entrepreneur/manager of an entrepreneurial venture and small enterprise has their personal perception and manner of defining success that we have justification to move on to further research and analysis pertaining to the main motivators for the selection of an appropriate set of success criteria. Generally, a postulate is well known that an inherent value system is in the basis of the selected set of a specific individual's chosen set of success criteria, when it comes to their own entrepreneurial venture. In the long run, an individual's value orientations are a constant, whereas the objectives stemming from them are the guiding principles both in an individual's life and in the business area, in the sense of great influence on the decision making process, but also the overall be-

haviour. We can deduce that a value system is in the core of business success, but the strategy itself as well, as a manner of achieving it. In the endeavour to reach insight into the existence of certain relationships and relations between an entrepreneur's value system and their priority directions of actions, it is necessary to view in its fundament what are the possible dimensions and elements of the value system in the general sense.

One such analysis will make use of Schwartz theory of basic human values, which is broadly moderate and can be said to represent a universal structure comprised of ten proposed value orientations represented and defined in the figure below.

***Power**:* Social status and prestige, control or domination of people or resources. (I want to be appreciated and tell people what to do. I want people to do what I say.)
***Attainment**:* Personal satisfaction through a demonstration of competence according to social standards. (Being very successful is important to me. I want to stand out and impress other people.)
***Hedonism**:* Pleasure and satisfaction of their own senses. (I like to enjoy life. Having a nice life is very important to me.)
***Incentives**:* Excitement, strangeness and challenges in life. (Looking for adventure and love taking risks. I want to have an interesting life.)
***Self-direction**:* Independence, through a variety of activities and research. (I think it is important to be interested in things. I am serious and I try to understand everything.)
***Universality**:* Understanding differentiation, tolerance and protection of the welfare of all people and nature. (I think it is important that every person in the world should have the same treatment. I want justice for everyone and for people who do not know.)
***Bonhomie**:* Safeguarding and improving the welfare of people with that thing is made personal contact. (I always want to help people who are close to me. It is very important for me to take care of the people you know and love.)
***Tradition**:* Respect, trust and acceptance of obligations and ideas offered by traditional culture or religion. (I think it's important to do things in a way you learn from your family. I want to follow their commitments and tradition.)
***Affiliation**:* Limitation of actions, affection and reactions similar disputes or in the form of injustice towards others unlicensed social expectations or norms. (I believe that people should do what they say. I think people should realize their role at all times even when someone is not watching.)
***Safety**:* Safety, harmony and stability of society, as well as personal relationships. (Safety of my country is very important for me. I want my country to be safe from its opponents.)

**Figure 1** Schwartz's dimension of human value
***Source:*** Bardi & Schwartz, 2003

In researching the success criteria of owners/entrepreneurs/managers, we can say that they are a consequence of an individual value system. The authors of the representation below point out that the value system is stable as long as the situation objectives are highly significant and serve as guiding principles in an individual's life. Values represent an aspect of personality that are practically usable and represent high stability over time. The given values represent a guide in the decision making process and conducting actions, so that the owners apply criteria for success evaluation which are in compliance with their values. What can be seen in the representation of Schwartz theory of basic human values is the value orientations that are theoretically structured based on complementarity or conflicting nature of motivational objectives that they represent.

It would be normal if the only indicators for measuring success were of objective nature regardless of all the shortcomings and certain aggravating circumstances of their application. A substantial number of authors point to the possibility and significance of the use of subjective measures of success, which can be highly efficient and realistic success assessment measures, but also the best way for providing certain information that cannot be gathered by another form. Wand and Ang (2004) established three principal reasons why it is better to use subjective than objective success measures:

- First, most small enterprises are not able or ready to provide objective information on business operations, especially in the first year;
- Second, accounting data of these enterprises are very complicated to interpret;
- Third, if the sample is formed from enterprises from different industries, then the circumstances of the industry have a great influence on the accounting data.

Subjective success measures are not complete or perhaps perfect, which is pointed out by justifiable criticism due to high share of subjective component, making them inappropriate for comparison between enterprises (Reid & Smith, 2000). The utility of this group of measures has been confirmed by comparing the data on the subjective perception of success of owners /entrepreneurs/managers with objective data of success by identifying a high positive correlation between these two groups of data, which highlights a high precision in expressing success through subjective measures (Baron & Markman, 2000).

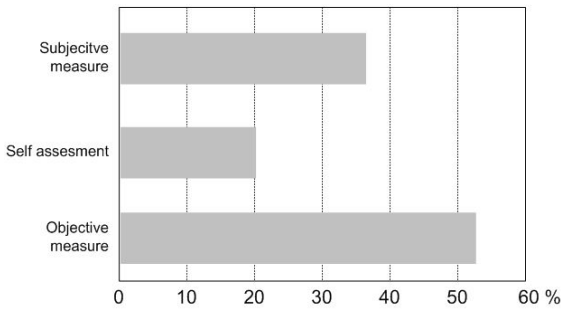


**Figure 2** Number (frequency) of papers which are used some kind measure of success (1995-2007)
**Source:** Perez & Canino, 2009

It can be concluded from Figure 2 that objective success measures are represented in the volume as the previous two together, which testifies that they are far more popular and enjoy a higher degree of trust among researchers into this topic.

To make the omission smaller, and so the potential shortcomings of future results and conclusions, due to nature itself of entrepreneurial ventures and small enterprises, we opted within the research to enable the owners/entrepreneurs/managers to freely express the subjective feeling of success i.e. success of their business venture, and the degree of appreciation of personal and family criteria in measuring business success.

It must be pointed out that the financial measures of performance of small enterprises are not sufficient for realistic and objective expression of achieved business results and expressing business success due to all their above mentioned shortcomings, but also because subjective criteria are hard to measure and compare. The above mentioned choice is rationally necessary, that is, a combination of subjective success measures is desirable.

#### 1.2.1. Competitiveness – the function of survival as a measure of success

One of the well-known problems of entrepreneurial ventures and small enterprises is high failure rate. Thus, success in this area cannot only be measured by the number of established business ventures, but it is necessary to contribute to reduction in the number of wound up small enterprises. Thus, the survival of a business venture becomes a key determinant of success in which all stakeholders are interested, in the form of both commercial and non-commercial institutions of the environment finding their interest in supporting small enterprises. In addition to the usual and most used measures of performance, profitability and growth (number of employees), some authors also use the time period of conducting business as a practical subjective measure of individual business success (Luk, 1996; Sapienza & Grimm, 1997; Bruderl, Preisendorfer, & Ziegler, 1992; Pennings, Lee, & van Witteloostuijn, 1998). In a more detailed analysis of success or failure of a small enterprise, the time period of operating can be a reliable success indicator only if winding up a small enterprise or abandoning a business venture is not venture, that is, if the failure is forced. Forced foreclosure or failure of business occurs after a certain time period when, due to lack of conditions, it is not possible to continue business operations. This form of giving up business is explained as failure or bankruptcy. Also, contrary to the previous, it can be a voluntary giving up of one's business (transfer from self-employment to employment or unemployment) due to lack of readiness or motivation. Generally, we can speak about voluntary and forced discontinuation of one's business venture, whereas survival as a measure of success of a small enterprise implies a time period spent in business that will be finished by some form of business discontinuation without a new form of self employment (being self-employed for a certain period): Thus the measure of success of a small enterprise is determined by the time period of operation that will be finished solely by forced rather than voluntary abandonment of one's own venture. Based on the above, we can conclude that in case of conducting research on a sample comprised of active small enterprises, or surveying owners/entrepreneurs/managers we can deem that the enterprise with a longer period of existence is more successful.

We can definitely agree, due to all the difficulties in measuring success, especially in early stages of small enterprises, when already known measures of success do not have a great significance and usability, that identifying and measuring success as a measure of success is very easy, efficient and multiply useful. Survival as a measure of success especially manifests its reliability in terms of expressing business results in small enterprises and entrepreneurial ventures that are in the phase of conceptualization or in early stages of entrepreneurial process, when all other mentioned measures to this purpose exhibit significant shortcomings, which were elaborated above. In such circumstances, survival as a measure of success expressed through the length of existence period absolutely expresses the competitive power of business venture, as the length of operation

period in the initial stages of development fully reflects the resource potential of a business venture, which is drastically different due to existence or non-existence of strategic orientation as one of the factors essential for business result based on innovativeness. Also, all success measures that we mentioned manifest solely their absolute value at the level of an individual entrepreneurial venture or small enterprise, whereas they get full value in relative sense through the competitive relationship, when the chosen set of measures expresses the real strength of the business entity compared to relevant competition. Thus competitiveness established based on survival indicators in the category of business ventures and small enterprises manifests essential relevance and reliability as a measure of business success.

## 2. Methodology

### 2.1. Data and variables

The main sources of data analyzed factors (variables) activities of the entrepreneurial process in this paper are the results of research on the GEM project in 2014. The criterion for these choices, to enter the sample, was the availability of data by selected variables, participating in GEM project in 2014.

Random variables are divided into two groups. Group variables were selected as the survival of ventures. Indicators are presented through various stages of maturity in the business enterprise, and include the following characteristics:

Variable marked suboan (Nascent entrepreneur: Involved in setting up a business) entrepreneurial activity in the phase of the entrepreneurial process in which entrepreneurs exhibit emerging as individuals who are currently owners or managers of new businesses who are engaged resources and achieve a certain type of revenue less than three month.

Variable babyby (Owner-manager of young business – up to 3.5 years old) represents individual bearers of entrepreneurial activity in the form of the owner or manager of the business from a certain type of revenue in less than 3.5 years;

Variable marked TEA (Total Early-Stage Entrepreneurial Activity) index is the main indicator of the volume of entrepreneurial activity in this study and contains the previous two indicators;

Variable estabbu (Owner – manager of an established business more than 3.5 years old) is an indicator of entrepreneurial activity the last phase of the entrepreneurial process, includes individuals who fit the owner or entrepreneur named realize certain income during more than 3.5 years of operation.

Variable anybus (Overall Entrepreneurial Activity), which involves entrepreneurial activity from the previous three phases.

The second group of variables that were selected as indicators of innovative activities include the following sub-continent: the new products – a combination of the market (customer - competition) -% TEA: A new product – market combinations (customers, competition),% EB: The new product – market combinations (customers, competition); technology sector (high, medium) -% TEA% EB; New products - TEA% i%% EB: New product for all customers, some customers and no new products; and the use of new technologies -% TEA and EB%.

### 2.2. Hypothesis and methodology

Central research intention is related to the determination of the level of interdependence between business success as measured by the achieved level of maturity of the entrepreneurial venture as a measure of success and innovation. Available data of selected characteristics enable it to undertake an analysis in the form of determining the interdependence of selected groups of variables observed characteristics bearing in mind the intensity and direction of correlation.

The number of observations in the sample (number of participating countries of the GEM project in 2014), and ordering the use of parametric statistical techniques, that due to its sensitivity reproduce precise, more accurate conclusions.

The first thing we want to emphasize in the framework of the research results which will form the basis for all subsequent analysis is the relationship between the variables of survival as a measure of success reported in the form of the achieved level of maturity of entrepreneurial ventures and the results of innovative activities.

H1: *There is a positive correlation between the length of survival of the business enterprise measured by the achieved level of entrepreneurial venture maturity and level of innovative activity.*

Testing will be done for the hypotheses using Pearson correlation coefficient.

## 3. Research results and discussion

Before analyzing the results obtained during the selected statistical procedures, within a defined primary objective of the work, it is necessary to

proceed from definite positions of the theoretical basis of work in the consideration of the interdependence of success as measured by survival, or the maturity of entrepreneurial ventures and small businesses in relation to innovation and the results of this process. So we can say the following specifics that are inevitable when it comes to this topic:

- for all the difficulty in measuring success, especially in the early stages of small enterprises when already known conventional measures of success have great significance and usability, identifying and measuring survival as a measure of success is very easy, efficient and quite useful,
- due to numerous specifics, scope and structure of resources, speed and capacity for action, specific limits, it is reasonable to point out that small businesses are not free large miniatures, which is necessary to take into consideration when these and similar analyzes,
- when one mentions the theme of innovation and role of the special place occupied by small businesses and entrepreneurial ventures due to the very worthy participation in the innovation process in terms of the scope and the results achieved, generally speaking and especially when it comes to technological change,
- officially accepted that there is no optimal size of companies is practically predestined for generating innovation at the maximum level, the usual intuitive assessment and analysis of previous studies confirm that small businesses differ significantly and play an important role in this process,
- unequivocally mentioned the role of small enterprises achieved the unique benefits that are related to the lack of bureaucracy, efficient and intensive informal communication, as well as the flexibility and adaptability of the proximity to the market,
- some companies certainly recognize that innovation efforts and adaptation to new procedures and new technologies significantly increase competitiveness, as a relative measure of business success,
- innovation capabilities associated with strategic thinking and management is a key factor that separates the entrepreneurial ventures of small businesses. Small businesses have a clear picture of the future will use the potential of growth based on innovation, because it will devote considerable attention to the development and management of human resources development strategy.

**Table 1** Correlation measures of success and inovativeness

| | | % TEA: New product – market mixed (customers, competitors ) | % EB: New product – market mixed (customers, competitors) | % TEA: technology industry (high or middle) | % EB: technology industry (high or middle) | % TEA: New product for all customers | % TEA: New product for some customers | % TEA: without new product | % EB: New product for all customers | % EB: New product for some customers | % EB: without new product |
|---|---|---|---|---|---|---|---|---|---|---|---|
| % 18-64 pop: START-UP/NASCENT (suboan) | Pearson Correlation | -,004 | ,156 | -,469** | -,371** | ,106 | -,045 | -,039 | ,218 | ,036 | -,156 |
| | Sig. (2-tailed) | ,974 | ,208 | ,000 | ,002 | ,395 | ,717 | ,752 | ,077 | ,771 | ,208 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: BABY BUS OWNER (BB) | Pearson Correlation | -,283* | -,074 | -,542** | -,470** | -,028 | -,308* | ,201 | ,095 | -,158 | ,033 |
| | Sig. (2-tailed) | ,020 | ,550 | ,000 | ,000 | ,824 | ,011 | ,103 | ,444 | ,201 | ,791 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: ESTABL BUS OWNER (EB): s | Pearson Correlation | -,278* | -,250* | -,288* | -,241* | -,191 | -,277* | ,285* | -,105 | -,239 | ,203 |
| | Sig. (2-tailed) | ,023 | ,042 | ,018 | ,050 | ,121 | ,023 | ,019 | ,400 | ,052 | ,099 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: Anybus | Pearson Correlation | -,244* | -,090 | -,508** | -,421** | -,069 | -,257* | ,196 | ,062 | -,150 | ,049 |
| | Sig. (2-tailed) | ,047 | ,467 | ,000 | ,000 | ,581 | ,036 | ,111 | ,617 | ,224 | ,695 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: TEA | Pearson Correlation | ,163 | ,040 | ,554** | -,459** | ,033 | ,191 | ,094 | ,164 | -,064 | -,065 |
| | Sig. (2-tailed) | ,188 | ,747 | ,000 | ,000 | ,792 | ,121 | ,451 | ,185 | ,608 | ,604 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

**Source**: Author's Calculation

**Table 1** Correlation measures of success and inovativeness

| | | % TEA: small competitiveness | % TEA: middle competitiveness | % TEA: high competitiveness | % EB: small competitiveness | % EB: middle competitiveness | % EB high competitiveness | % TEA: use new technology (to 1 y) | % TEA: use new technology (1 to 5 y) | % TEA: uld technology | % EB: use new technology (to 1 y) | % EB: use new technology (1 to 5 y) | % EB uld technology |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % 18-64 pop: START-UP/NASCENT (subcan) | Pearson Correlation | -,029 | ,141 | -,214 | -,092 | ,160 | -,144 | ,108 | -,105 | -,017 | ,075 | ,133 | -,114 |
| | Sig. (2-tailed) | ,813 | ,255 | ,082 | ,460 | ,196 | ,244 | ,383 | ,399 | ,890 | ,547 | ,284 | ,358 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: BABY BUS OWNER (BB) | Pearson Correlation | ,149 | -,044 | -,264* | ,002 | -,027 | -,150 | ,060 | -,248* | ,000 | ,102 | ,064 | -,095 |
| | Sig. (2-tailed) | ,228 | ,722 | ,031 | ,512 | ,829 | ,203 | ,627 | ,043 | ,479 | ,412 | ,605 | ,442 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: ESTADI DUS OWNER (EB): s | Pearson Correlation | ,084 | -,048 | -,102 | ,202 | -,204 | -,049 | -,241* | -,270* | ,297* | -,184 | -,222 | ,227 |
| | Sig. (2-tailed) | ,497 | ,698 | ,410 | ,102 | ,098 | ,693 | ,049 | ,027 | ,014 | ,136 | ,071 | ,065 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: Anybus | Pearson Correlation | ,090 | ,006 | -,227 | ,096 | -,047 | -,146 | -,048 | -,251* | ,161 | -,015 | -,025 | ,022 |
| | Sig. (2-tailed) | ,468 | ,959 | ,065 | ,440 | ,703 | ,238 | ,699 | ,041 | ,193 | ,907 | ,838 | ,860 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| % 18-64 pop: TEA | Pearson Correlation | ,070 | ,049 | -,264* | ,000 | ,071 | -,176 | ,091 | -,190 | ,038 | ,100 | ,111 | -,118 |
| | Sig. (2-tailed) | ,574 | ,694 | ,031 | ,999 | ,568 | ,153 | ,463 | ,123 | ,760 | ,421 | ,370 | ,340 |
| | N | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |

*. Correlation is significant at the 0.05 level (2-tailed).

**Source**: Author's Calculation

Sublimation of the preceding paragraphs in part of the analysis of the quantitative results gives us precise answers in considering the connection between the observed characteristics through selected variables. Since the phases in the development of entrepreneurial ventures precisely delimited and clearly set their comparison with the results of innovative activities defined clearly point to the following conclusions.

In analyzing the relationship maturity of entrepreneurial ventures in TEA phase (length of survival) and results expressed in new product innovation – the market-based relationships, we can say that there is a slight negative correlation since Pearson's coefficient amounts to r = -0163 relative to comparison to a higher stage where EB with a small, but statistically significant negative correlation since Pearson's coefficient is r = -0.250. From the previous comparison we can conclude that the higher the level of innovation present in a lower stage of maturity of entrepreneurial ventures when the result is expressed in a new category of products – market.

In analyzing the relationship maturity of entrepreneurial ventures in TEA phase (length of survival) and results expressed technological innovation development of the sector on the basis of the relationship, we can say that there is a medium or a statistically significant negative correlation since Pearson's coefficient is r = -0554 relative to comparison to a higher stage of EB where with a small, but statistically significant negative correlation since Pearson's coefficient is r = -0241. From the previous comparison we can conclude that the higher the level of innovation present in a higher stage of maturity of entrepreneurial ventures when the result is expressed in the technological development of the sector.

In analyzing the relationship maturity of entrepreneurial ventures in TEA phase (length of survival) and results expressed in new product innovation on the basis of the relationship, we can say that there is a slight positive correlation since Pearson's coefficient is r = 0.033 compared to compare to a higher stage where EB present small, negative correlation since Pearson's coefficient is r = -0.105. From the previous comparison we can conclude that the higher the level of innovation present in a lower stage of maturity of entrepreneurial ventures when the result is expressed in the category of new products.

In analyzing the relationship maturity of entrepreneurial ventures in TEA phase (length of survival) and the results of innovation expressed intensity of competition on the basis of the relationship, we can say that there is a slight positive correlation since Pearson's coefficient is r = 0.070 compared to compare to a higher stage where EB present small, positive correlation since Pearson's coefficient is r = 0.202. From the previous comparison we can conclude that the higher the level of innovation present in a higher stage of maturity of entrepreneurial ventures as a result of pronounced intensity of competition in the category.

In analyzing the relationship maturity of entrepreneurial ventures in TEA phase (length of survival) and the results of innovation expressed using new technology-based relationships, we can say that there is a slight positive correlation since Pearson's coefficient is r = 0.091 compared to compare to a higher stage where EB present small negative correlation since Pearson's coefficient is r = -0.184. From the previous comparison we can conclude that the higher the level of innovation present in a lower stage of maturity of entrepreneurial ventures when the result is expressed in the category of use of the new technology.

As a general conclusion of the previous detailed analysis, we can conclude that partially confirmed the general assumption is starting research that advocates a greater degree of innovation of more mature phase of the entrepreneurial process and a longer operating period. The hypothesis is confirmed with the characteristics of technological innovation belonging to the sector and the intensity of competition, and higher level of innovation present in the cases mentioned in older stages of the entrepreneurial process and a long period of survival. While the indicators of innovation as new products, markets and use of new technology at higher level of competitiveness exhibited lower stages of maturity of the entrepreneurial process and a shorter period of existence.

In the end, we can conclude that the results of the previous analysis division according to the observed variables in the analysis of the interdependence of success or survival period expressed in maturity phase of the entrepreneurial process and indicators of innovation all through the prism of time dimension as the key determinants of the existence of the strategic orientation of the business enterprise, resulting in a too early stage in business development and the short period of observation as a measure of success. However, what is clearly indicative of what can be seen from the results is the fact that the more mature phase in the development of business exhibited its innovative potential in innovation indicators for which the set time limit on the period of maturity was a significant event for all mentioned starting assumption.

## Conclusion

So far, the capital of the company represented a critical and scarce resource, while the human resources used exclusively and decisively to ensure and enhance the return on investment. Today, companies are trying to understand and use the new logical values that underlie their own competences, market evaluation criteria and the final competition. Both managerial and entrepreneurial skills and knowledge in the context of small businesses form the basis of developments in the field of technological innovation, specialization of business processes and innovative product which provides the most important source of competitiveness.

Innovation is necessary to treat it as a complex process, which primarily includes numerous investment opportunities. Within this perspective, investment, intellectual capital and human resources based on knowledge, shall be treated as a separate, independent kind of capital. If we accept this view, then, the development process is the obligation of management, since this approach leads to a decisive innovation.

The success based on innovation is directly linked to innovation activities and changeable orientation. However, these two elements are directly dependent on possession of adequate knowledge and skills, as well as efforts to address innovation by key individuals, entrepreneurs, owners, managers.

Innovation associated with the ability of strategic thinking and management is a key factor that separates the entrepreneurial ventures of small businesses. Small businesses that have a clear picture of the future will use the potential of growth based on innovation, because it will devote considerable attention to the development and management of human resources development strategy. Innovative capacities lead to sustainable and profitable business development if it is the commitment of key decision makers. SM

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# Risk Management for the Purpose of Business Decision-Making in Crisis Situations

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**Abstract**
Regardless of the ownership structure and the size of the company, there is inevitable confrontation with the specific risks and crises. Therefore, it is crucial for the fate of every enterprise to be familiar with methods of crisis management and risk management. The subject of this paper is to manage risk in order to make effective business decisions. The basic hypothesis is: conducting the wrong financial policy is a crucial factor of the causes of the enterprise crisis in Bosnia and Herzegovina. In accordance with the set hypotheses and the research object, the main aim of the research is to determine the factors that decisively influence the occurrence of crisis in the companies in Bosnia and Herzegovina. The first part of this paper explains in detail the concept and types of business risk, with emphasis on the importance of knowledge of crisis management. The second part of the paper is focused on the analysis of integrated risk management, defining strategies for its management, with calculation rate risk of investing in companies in Bosnia and Herzegovina. The third part of the paper refers to the research results, i.e. analysis of factors that influence the development of crisis situations in enterprises in Bosnia and Herzegovina.

**Keywords**
Crisis management, business risk, risk management, risk transfer.

## Introduction

All companies are established in order to operate as a going-concern, and to carry out their activities in the long run. This path of performing various business activities comprises dealing with the risks and emergencies for any company, regardless of its ownership structure, size, activities, staff competencies and management. Therefore, it is crucial for the fate of every enterprise not only to have a good knowledge of crisis management, the management of risk, but also to take preventive action, recognize the upcoming uncertainty and try to adapt business enterprises thereto. The survival of the company is nowadays determined precisely by ability to adapt and respond to constant change. That is why the contemporary management laid the problem of crisis management to the top of interest of both practitioners and theoreticians in the field of management. In addition to the interest for preventive action in those entities whose business is already showing the symptoms of crisis, there is a growing trend in the number of companies that are already in a state of crisis, which imposes the need for knowledge and application of concepts for overcoming crisis situations. Also, the risk is imminent and cannot be avoided. On the other hand, it can be influenced. Information on risk management is closely linked with other information on which the right decisions are made. There are a number of organizations dealing with risk management and the outcome of these studies has defined international

standards for risk management AS/NZ 4360: 2004 and ISO 31000:2009. International standard ISO 31000:2009 is the first international standard for risk management in the world and it appeared in 2010. In addition to these elements, it is important to note that risk management is a process that includes a series of steps that allow the initial and continuous assessment of potential risks and dangers, all with the aim of ensuring a positive business that will achieve the goals. Risk management is a business function that, first of all, identifies the risk, then evaluates and manages the risk, in order to eventually control it, which means that company systemically manages risks, to which it is exposed during its operations.

## 1. Definition and classification of risk

### 1.1. The concept of risks

The risks in the business are an integral part of every enterprise and are something you cannot avoid. Van Horne and Wachowicz-u (2002) said that "Risk can be defined as a deviation of the actual from the expected yield" (p. 91). Risk can be seen as the probability of suffering loss, damage or injury. However, risks should be seen as a chance, because when any significant entrepreneurial decision needs to balance the ratio of profit and loss, and strive to find ways to reduce the risk to a tolerable measure. In short, it is necessary to manage risk. Profit, according to Knight Frank, occurs as residual income that remains available after deduction of all contractual obligations of the company's income (Vukmirović, 2006). This is the reward for bearing the costs of uncertainty.

This is the reward for bearing the costs of uncertainty. As Vukmirovic (2006) further states that "modern corporations are specialized to make decisions in the markets under conditions of uncertainty and risk" (p.33). In order to diversify and lessen the risk, it is necessary to do forecasting and strategic planning. Managers differ in ability to anticipate, and the capital market ensures that investors, who have the ability to forecast and do strategic planning, benefit most.

The modern view of the risk perceives risk as an opportunity in which the company can achieve the planned level of growth and development. The aim of the risk management function is to provide analytical support in the process of business decision-making, based on which possible dangers and ways to respond to possible unforeseen problems will be identified. It is about the implementation of a series of techniques and models in the function of risk management: risk control, corporate governance and risk management process itself.

### 1.2. Types of risk

Risks can be classified differently depending on which segment of business operations they are related to. Business risk is the risk related to the financial result of business. Risks that occur in the company appear in the work process, business and enterprise development, and governance and management of the company. Business risk consists of numerous internal and external risks in company business, and they are presented in Table 1.

**Table 1** Internal and external business risk

| | Internal business risk | | External business risk |
|---|---|---|---|
| 1. | The risk of the company organization | 1. | Commercial risk |
| 2. | The risk of structure of corporate assets | 2. | Market risk |
| 3. | The risk of staff | 3. | The risk of executing the sales contract |
| 4. | Commodity risk | 4. | Transport risks |
| 5. | The risk of resource use | 5. | Export risks |
| 6. | The risk of capital investment | 6. | Political and social risks |
| 7. | The risk of success | | |
| 8. | The risk of innovation | | |

**Source:** Deželjin, Deželjin, Dujanić, Tadin, & Vujić, 2002

Business risks that occur within the business activities in the companies are called internal business risks, and include the following risks:

1. The risk of the organization of the company is a special risk that consists in the danger that the company organization does not comply with the requirements of business activities and its needs. This risk depends on the size of the company, as well as the mutual coherence of certain parts and functions of the company. The risk of the company organization may include: the risk quality of the organization, the risk of elasticity, the risk of one-sidedness of the organization, the risk of instability of the organization, the risk of size and location of the company.

2. The risk of structure of corporate assets is expressed quantitatively and qualitatively, and the data used are obtained analyzing the business and enterprise balance. The risk of structure of corporate assets may include: quantitative risk (which is divided into the risk of profitability, liquidity risk, the risk of excessive or too little inventory, the risk of disruption of production), qualitative risk, inflexibility, volatility risk, the risk of structure of corporate assets (which can also be divided into quantitative and qualitative risk funds).
3. Risk of staff refers to the risk that the company can be damaged due to inadequate structure of employees, professional incompetence etc. The risk of staff includes: qualitative and quantitative personnel risk, staffing levels and the risk of human resources management.
4. Commodities risk ranks in the area of determining the quantity, quality and value of the goods. The risk is higher if the company has a wide assortment.
5. The risk of the use of resources derives from danger that certain resources are insufficiently exploited, or used contrary to the technical rules or individual interrelated and complementary resources are not sufficiently quantitatively and qualitatively consistent.
6. Risk of capital investment is linked to any investment in enterprise development.
7. The risk of success is tied to the profitability of the company and represents a danger that for whatever reason the expected rate of return on invested capital does not realize.
8. The risk of innovation comes from the danger that innovation cannot be applied or that its application does not achieve the expected result.

External business risks are those whose sources are outside the company, and which include various types shown in Table 1.

Overall, the company brings its own business decisions on the basis of information on which the risk depends on, i.e. in this case the uncertainty of the expected results of business activity.

## 2. Knowledge of crisis management and risk management in the function of directing companies from crisis

The word crisis is now probably one of the most frequently used words in everyday speech. It is used to describe personal or private situation, but more often to describe the state with potentially negative consequences in which the society as a whole or individual organizations and systems within it can find themselves. Despite the fact that the word "crisis" (Greek Krisis) has become one of the most commonly used terms in modern economic relations, the frequency of such application has not yet led to a clear understanding of its conceptual content, implying different interpretations of the term. The crisis means any sudden interruption of continuous development uninterrupted until such event. In the narrow sense of the word, we can say that the crisis represents a specific condition in the development of one phenomenon i.e., a turnover of things in relation “to the former stream”. In essence, the crisis represents a situation in which we must make a decision. In the business economy, the crisis means the condition that calls into question the survival of the company, i.e. its existence is threatened. The most complete definition of the crisis of the company has been given by Ulrich Krystek. He believes that the crisis can be seen as processes that are unplanned and unwanted, time-limited and which can be conditionally affected, whose outcome is ambiguous and could mean the destruction or restitution (and metamorphosis). They threaten the continued existence of the affected enterprises applying considerable damage to targets that are relevant to the company's survival. Crises of companies, certainly in their acute stages, are further characterized by surprise, time pressure and the pressure on decision-making (Senić & Lukić, 2008).

Crisis management is based on knowledge of crisis business systems in the context of contemporary political, economic, trade, security and other risks, as well as the adoption of individual and team competencies for the identification, analysis and risk assessment, selection and implementation of appropriate strategies in the process of decision making and integrated crisis management of risks in the financial system. Before a decision is made on the application of appropriate model of overcoming the crisis, the so-called crisis management is usually introduced and it does not mean a change in the existing management or

bringing a new one, but the establishment of such a system in the business environment that demands quick and focused action at all levels of the business system. Crisis management first identifies the situation and gives a diagnosis of the situation, analyzes the production, market and financial characteristics of enterprises and then takes measures to overcome the crisis or strategy shift. The optimum situation is where the management predicts potential impacts of the crisis and has enough time and opportunity to adjust to it. Existing management is often changed because of the role it had in untimely identification of occurrence and growth of crisis or their own mistakes made by negligence or ignorance. It is unlikely that the same management is able to offer a solution out of the crisis. Signals of the crisis, even the weak ones, should not be ignored. If the crisis is rampant, appropriate actions have not been undertaken in the meantime, the responsibility lies entirely with the management. In management response to the crisis, the most common models are the reorganization of the business system or change of the organizational structure, reducing the size of the organization, different models of revitalization or healing of operating system, and often used is the model of restructuring the business system as a way of a complex turnaround and exit from the crisis. Which of the models we can accept as a business crisis response is not easy to recommend. When a business management system is in doubt, consultants can be employed, which is common practice in developed market economies and which gives excellent results. Business strategies in crisis management situations that may apply in the business system can be reduction strategies (for example: abandoning some activities of a business system, narrowing the production program and divestments), or recovery strategies (for example: fast implementation of action because the time factor is essential or lower the costs). Business models of crisis management that can be applied by management include simulation models (alternative courses of actions are tested), model scenarios (analysis of alternative scenarios for the various possible outcomes of crises) and portfolio models (a quick overview of the situation in relation to the environment and internal forces of a business system). In order to overcome the crisis situation in business it is necessary to apply a simulation of crisis so that participants experience what steps need to be taken, to form a crisis team and manage crisis. It is essential that managers apply strategic planning with regard to potential crisis situations, define the problem, work as a team and so on. Requests for information management in crisis situations are a prerequisite for deciding which moves from the historical data to estimation, projection, forecasts, and innovative planning. Crisis management requests processed, summarized data from different sources. It is important to note that information technologies that are related to the occurrence of changes, represent the potential to reduce the effects of crisis situations, because using them we can faster and more easily obtain information important to business in crisis situations (on the business processes, on relations with business partners, and other external information).

Management of business systems in crisis situations involves decision making and decision making problem solving in all aspects of their functioning. In order to achieve this, managers should have data available, information and knowledge necessary to make decisions and solve problems arising from crisis situations. Therefore, managers use quantitative methods and different analytical techniques that are adequate to decision-making problems in crisis situations, and the creativity in making the final decision is essential. Altogether affects the scope and effectiveness of managerial decision making in emergency situations, taking into account the efficiency of the decision-making process and management. Unlike risk management which includes an assessment of potential threats and finding the best ways to avoid those threats, crisis management involves dealing with threats before, during and after they occur. Thus, crisis management consisting of skills and techniques required for the identification, assessment, understanding and coping with difficult situations, especially from the moment of their appearance to the point where you begin the recovery procedures.

## 3. Integrated risk management with respect to decision making process

The management of business risks started to be considered as a structured process that connects business strategy, people, technology and knowledge with the aim of evaluating and managing the risks to which the company is exposed in achieving its primary objective. This way of thinking about the function of risk management is a comprehensive, future-oriented and focused on processes, with an emphasis on managing all business

risks, not only individual (for example like a currency or interest rate risk).

This new risk management approach called integrated risk management involves the identification and assessment of the overall risk exposure, which directly or indirectly affect the value of the company and the implementation of a risk management strategy that is complementary to the business strategy. Integrated risk management links risk management with the creation of value and risk is expressed in terms of the impact on corporate objectives while emphasizing the relationship between measures of risk and performance measures of total business.

All stakeholders are also taken into account: shareholders, creditors, managers, employees, customers and the wider community in which the company operates. Integrated Risk Management provides greater systemic and comprehensive way of identifying risks and their quantification and active management. Integrated risk management is a real approach to risk management and many companies decided to implement it. Holistic approach to integrated risk management is determined by the basic principle – the responsibility of all employees who are expected to understand and to manage risks within their areas of responsibility.

Risk management as a continuous process of identifying and quantifying the risks is integrated in the most important business processes such as strategic management, strategic planning, operational management, and funding and investments decisions in order to ensure a consistent assessment of risk in making all business decisions. It is believed that such an approach to risk management is justified - it is not viewed as an independent or less important business function but it is already integrated into other strategic functions in the company. Finding balance and possible business opportunities for achieving higher earnings as the primary objective of an integrated risk management can not mean complete elimination of risk as a possible target. The effectiveness of risk management involves taking actions designed to minimize the negative impact that risk may have on expected earnings and cash flows of the company while exploiting the positive market opportunities. This is the way to one of the basic tenets of risk management: risk is not always necessarily bad.

Risk is a threat, but also an opportunity to be realized, and using a variety of tools for risk assessment the decision is made about to which risks and to what extent the company needs to be exposed to. The effectiveness of the risk management does not involve the minimization of risks to which the company is exposed by forming a perfect protection, but rather a strategy that will enable the company to protect its future cash flows from undesirable outcomes and negative results, leaving the possibility of achieving higher earnings through changes in the market with positive impact on business. Using selective risk management, companies with competitive advantages in collecting information about future developments in the market may increase their value. Businesses usually use risk mapping in the implementation of integrated risk management in business process.

The process of the risk mapping greatly assists managers not only in response to a question to which risk the company's operations are exposed, but also in making decisions on whether these risks should be managed at the enterprise level, which should be transferred to other market participants, and which combination of instruments to apply to achieve optimal effects of risk management. This process classifies and identifies different types of risks to which the company's operations are exposed, and the sizing impact of particular risks on cash flows of the company and its value is carried out. It is followed by making decisions about how to deal with the identified risks, given the strength of their impact on business operations. In this crucial part of the management it is necessary to opt for one of the following strategies:

1. The strategy of avoiding risk. The success of this strategy in an open economy is highly questionable, almost impossible. Because, even if the company avoids direct risk exposure, a certain part of business partners will be exposed and in this way also a company that operates with them will indirectly bear part of the risk.
2. Hedging. This strategy includes reducing the probability of incurring losses in business, or at least reducing their size by adjusting assets and liabilities.
3. Risk transfer. It is understood that risk transfer to other market participants, is primarily concerned with the use of derivatives like futures contracts and the purchase of various insurance policies from insurance companies.
4. Passive assumption of risk. This strategy is in use only in the case that the decision of

the management about passive sharing of risks was the result of serious analysis and assessment of the risk impact to the cash flows of the company, and that it showed that exposure of a company to various risks does not significantly affect its value.

To successfully manage risks in the longer term, it is necessary to monitor changes in the environment and often create and edit map risks in accordance with the changes and new emerging risks. Furthermore, the environment risk and the success of risk management are continuously evaluated. It is important to emphasize a very important presence of feedback - the current monitoring results are taken into account when redefining the context (environment), which was the first step. The created risk map should be reviewed continuously and the process of risk mapping needs to be dynamic the same the business environment is.

## 4. Financial accounting scope of company's assets exposure to risk

Asset classification is the process in which an item of assets is attributed with risk categories as determined by the probability that the debtor will be serviced and debt settled in accordance with the agreement. Asset classification provides a basis for determining the appropriate level of provision for possible losses due to exposure to credit risks. These provisions, together with the general reserves for unidentified risks and capital are the basis for determining the ability of banks to absorb losses. The policy on provision for exposure to credit risk ranges from strictly prescribed to discretionary depending on the banking system. In Bosnia and Herzegovina (hereinafter BiH), this policy is prescribed by the Banking Agency of the Republic of Srpska (RS) and the Banking Agency of the Federation of BiH (Vukmirović, 2011). RS Banking Agency prescribes the following levels of provision for loan losses of banks:

**Table 2** Levels of provisions for credit losses of banks

| Asset quality | | % provisions |
|---|---|---|
| Category A | A good assets | 2% |
| Category B | Assets with special | 5 - 15% |
| Category C | Substandard assets | 16 - 40% |
| Category D | Doubtful assets | 41- 60% |
| Category E | Loss | 100% |

**Source:** Agencija za bankarstvo Republike Srpske, 2013

It is important for each company that commercial banks assesses the assets items classified in category A (good assets) because in this case these parts of assets are not subject to criticism, loans are secured with first class collateral and do not have detected problems and obstacles that would impede or prevent payment of principal and interest.

Any other categories (Table two) has some notes about a particular weakness for assets items that are binding for the bank to include all such items and thus classify them, depending on the weight, to one of the categories B to E (depending on whether it is about a delay in repayment, bad collateral, doubtful assets or loss).

## 5. Analysis and calculation of investment risk rate in the companies in Bosnia and Herzegovina

If investors decide to invest in shares in the BiH capital market, it is necessary for them to assess the riskiness of companies in whose securities they want to invest. There are several ways to determine the status of the company's shares that the investor intends to buy. If they compare the market price of the company's shares and the actual value of the company per share, they can apply the discounted cash flow method, and in this context, the method of building. Bojovic (2006) considers that "according to the method of building, the discount rate is calculated as the sum of the following three components:

- The real rate of return on investment without risk;
- The risk premium of investment into the country;
- Prize money for the investment risk to the company" (page 137).

If it is assumed that the interest rate on government bonds in BiH is around 3% annually, according to the above method, the real rate of return on investment without risk in BiH amounts to 3%. If we assume that the risk premium for investing in the country, based on customer-specific risk, is 6%, it is possible to perform an analysis of the levels of risk of investing in one of the companies by means of a hypothetical example.

**Table 3** Risk rate budget of investing in a company

| | Risk scale of investing in the company % | | | |
|---|---|---|---|---|
| | 0 | 1 | 2 | 3 |
| Key man | | | | |
| Organizational structure | | | + | |
| Compactness of team management | | | + | |
| Strategic planning | | | | + |
| Production program | | | + | |
| Specialized knowledge of one specialist | | | | + |
| Weighted | 0 | 0 | 6 | 6 |
| Summation | 12 | | | |
| The number of parameters | 5 | | | |
| Specific risk | 2,4% | | | |
| Size of company | | | | |
| Number of employees | | + | | |
| The value of business assets | | + | | |
| Rating competition | | + | | |
| Weighted | 0 | 3 | 0 | 0 |
| Summation | 3 | | | |
| The number of parameters | 3 | | | |
| Specific risk | 1% | | | |
| Financial structure | | | | |
| Fixed assets/equity | | + | | |
| Fixed Assets and Inventory/Long-term capital | | + | | |
| Equity/Total equity | | | + | |
| Contribution gain/RevenueArrival | | | + | |
| Financial Expense/Income | | + | | |
| Weighted | 0 | 3 | 4 | 0 |
| Summation | 7 | | | |
| The number of parameters | 5 | | | |
| Specific risk | 1,4% | | | |
| Production/geographic diversification | | | | |
| The contribution of each product to income | | + | | |
| The existence of long-term contracts | | | + | |
| The share of foreign investments in income | | | + | |
| Access to the EU market | + | | | |
| Weighted | 0 | 1 | 4 | 0 |
| Summation | 5 | | | |
| The number of parameters | 4 | | | |
| Specific risk | 1,25% | | | |
| Diversification of customers | | | | |
| The concentration of customers | | | | + |
| The size and position of the dominant buyers | | | | + |
| The existence of long-term contracts | | | | + |
| The importance of products for customers | | | + | |
| Weighted | 0 | 0 | 2 | 9 |
| Summation | 11 | | | |
| The number of parameters | 4 | | | |
| Specific risk | 2,7% | | | |
| The ability to predict | | | | |
| Age of companies | | | | + |
| The stability of operating results | | | | + |
| Discontinuities in business | | | + | |
| Changing economic environment sectors | | | | + |
| Weighted | 0 | 0 | 2 | 9 |
| Summation | 11 | | | |
| The number of parameters | 4 | | | |
| Specific risk | 2,7% | | | |
| Total risk rate of enterprises in % | 11,45 % | | | |

**Source:** Authors

When you add up all of the previous components, you will receive the discount rate in the amount of 20.45%. This means that a good risk management provides a great guarantee in operating activities and administrative functions of individual sectors to senior management team and ultimately to the administration of the organization. Accordingly, we can identify all the potential benefits of risk management and they are reflected in the following:

- supporting the strategic and business planning,
- supporting the efficient use of resources,
- promoting continuous improvement,
- reducing shocks and unwelcome surprises
- fast use of new features,
- improving communication between management and other parts of the organization,
- encouraging investors,
- help to focus on the internal audit programs, etc.

## 6. Causes of the crisis and recovery strategy

There are many factors that may lead an enterprise to a state of crisis. The correct identification of these factors, or causes, is of great importance for selection of proper exit strategies from the crisis and the recovery of the company. One of the aims of this paper was to carry out research in BiH, which included 50 companies of various sizes, structures, activities, life cycle and stages of their crisis. The aim was to present the factors that decisively influence the occurrence of the crisis in enterprises in BiH.

Out of total number, 30% of surveyed companies (15) identified financial policy of the company as a key factor in the causes of the crisis (management accounting omissions, misrepresentations of the legal framework, etc.), while 24% of companies (12) said that high costs of business were most responsible for the crisis (poor cost management, misinterpretation causes of costs, etc.). The same number of companies identified as a cause of the crisis the major projects, i.e. low power and expertise to participate in large projects, as well as the competitive disadvantages. The last in the ranking of the identified factors of the crisis, according to the positions of the companies surveyed, is inadequate financial control (10%) and poor management (8%), which includes the non-implementation of teamwork, the

traditional approach, lack of using modern methods, inadequate adaptation to modern conditions of the market, etc. (these findings are summarized in the following diagram).

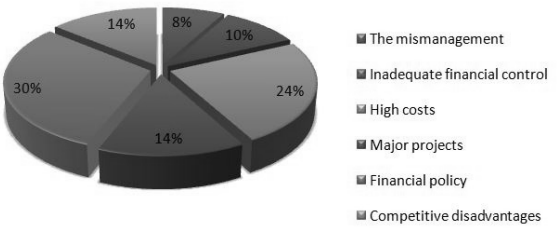


**Figure 1** Factors that influence the occurrence of the crisis in BiH companies

**Source:** Authors' Calculation

Based on the identified factors that cause the crisis, it is possible to define an adequate strategy that should lead to a recovery. The recommended recovery strategies depending on the causes of the crisis are shown in the following table.

**Table 4** Recommended recovery strategies depending on the cause of the crisis

| Causes of the crisis | Recovery strategy |
|---|---|
| The mismanagement | Changes in management and internal strategies |
| Inadequate financial control | Change of management; financial restructuring and internal strategy |
| High costs | Change of management; financial restructuring; internal strategies and external strategies |
| Major projects | Internal strategy |
| Financial policy | Financial restructuring and internal strategy |
| Competitive disadvantages | Internal strategies and external strategies |

**Source:** Kontić, 2007

## Conclusions

Modern business conditions that characterize the processes of globalization and integration lead to extremely unsafe and unstable business environment characterized by a high degree of risk. The risk cannot be completely avoided, but it can be influenced by different modalities. In the business world, companies can be exposed to a wide variety of risks, which occurs as a result of certain economic activities. To influence the risk, it is necessary to define the risk first of all. Properly defined risk provides an opportunity to be affected by a certain method.

Risk is not only a threat, but also an opportunity to be realized, and by using a variety of tools for risk assessment a decision is made about which risks the company needs to be exposed to and to what extent. The effectiveness of the risk management does not involve the minimization of risks to which the company is exposed to by the formation of perfect protection, but rather a strategy that will enable the company to protect its future cash flows from undesirable outcomes and negative results, leaving the possibility of achieving higher earnings through changes in the market that have a positive impact on business.

Risks may largely jeopardize the market position and financial position of trading companies in the domestic and international market. Thus, the company should determine acceptable limit of risk. For these reasons, managers tend to reduce to a minimum the adverse events that adversely affect trade.

Foreign projects are more risky than domestic projects, because the discount rate is higher, diversification of foreign investment projects operates at the height of the discount rate in the sense that it decreases it. Entrepreneurs should have information and a positive attitude towards them, because only then can they achieve good results. In addition to entrepreneurs, information should be available to consumers as well.

When we talk about companies in BiH, implemented research has shown that the majority of companies believe that a major factor in the financial crisis are company policies, then the high operating costs and poor expertise for the realization of large projects. On the other hand, the surveyed companies believe that competitive weaknesses, inadequate financial controls and management have a smaller impact on the occurrence of the crisis.

Particularly interesting area in companies are those in the public domain (i.e. public enterprises). These entities may be exposed to all the risks typical of private companies but, given the specificity of the public sector, and certain specific risks that are typical of the public domain. One of these segments is direct influence of political options on government and their interests and ignoring the real needs of the market. Therefore, the position of public enterprises, bearing in mind their prosocial role, as opposed to the market, is exposed to the risks of financial policy, high costs, competitive disadvantages to dependency of management in business decision making. However, the issue of risk in business decisions of

companies with majority ownership by the state is an area that requires a special study. SM

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# Image of Serbia and Food Production – Measurement, Determinants and Repercussions

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**Abstract**
Within the effects of integrated marketing communications it is possible, in addition to economic effects, to identify communication effects, which primarily relate to the image – of products, companies, but also of entire countries. It is the intensification of the activities of national branding that features as one of the approaches in the context of the efforts towards improving national competitiveness, where branding of one country is not necessarily oriented only to other countries' auditoriums but also to the auditorium within the country itself. The aim of these activities is to increase the consumption of products from a country that implement them.
However, there are authors who suggest that for the existence of preferences towards a product originating from a certain product-specific country image is more significant than the overall image of the country, while it is even possible for a negative general image of a country and positive product-specific country image to exist in parallel at a certain market. At the same time, within the model of the "hierarchy of effects" which refers to the effects of integrated marketing communications, the existence of preferences for specific product precedes the behavioral phase.
Bearing all this in mind, the subject of this paper is to explore the food product-specific image of Serbia (among the domestic auditorium) related to several food categories. In addition to measuring the level of the image, the paper researches image perception in the context of socio-demographic characteristics of the respondents, as well as its impact on the frequency of consumption of domestic brands. The survey was conducted in December 2015 on a convenience sample of 100 respondents from the North and the South Bačka Districts.

**Keywords**
Product-specific country image, food products, Serbia.

## Introduction

Within the effects of integrated marketing communications it is possible, in addition to economic effects, to identify communication effects (Salai & Grubor, 2011, p. 48), which primarily relate to the image – of products and companies, but also of entire countries. It is the intensification of the activities of national branding that features as one of the approaches in the context of the efforts of improving national competitiveness (Đokić & Đokić, 2015), where branding of one country is not necessarily oriented only to other countries' auditoriums but also to the auditorium within the country itself. The objective of such activities is to increase the consumption of products from the country conducting them.

There are, however, authors who point out that, for the existence of preference for a product originating from a country, the product-specific country image is more important than the overall image of the country, and that it is even possible for a negative image of a country and positive product-specific country image to exist in parallel (Fan, 2006). At the same time, within the model of the "hierarchy of effects" which refers to the

effects of integrated marketing communications, the existence of preferences for specific product precedes the behavioral phase (Salai & Grubor, 2011, p. 88).

Bearing all this in mind, the subject of this paper is to explore the food product-specific image of Serbia (among the domestic auditorium) pertaining to the production of several food product categories. In addition to measuring the level of image, the paper also looks into its perception in the context of socio-demographic characteristics of respondents, and also its impact on the frequency of consumption of domestic brands. The survey was conducted in December 2015 on a convenience sample of 100 respondents from the North and the South Bačka Districts.

## 1. Literature overview, model generation and inference of hypotheses

As far as national branding is concerned, Đokić and Đokić (2015) point out that increasing attention is devoted to internal branding. What should be understood in this context is that Fan (2006) highlights that national branding should be realised in a manner which is close to domestic population, and that Anholt (2002), as the editor of a special issue of Journal of Brand Management devoted to national branding, places internal branding at the first place of future topics.

However, Fan (2006) points out that the concept of national branding is multidimensional and depends on the context, so that product-specific country image is rather stated as an influential factor in the consumers' choice. In this sense, as it has already been emphasized, what is pointed out is the possibility of simultaneous existence of a negative national image and positive product-specific image of a certain country.

Starting from the regional context of the above mentioned topic, Van Ittersum, Candel and Meulenberg (2003) explain that differences in preferences to products of different regions can be explained by variations in the perception of product attributes, and the consumers' attitudes to the product's region of origin. Variations in attribute perceptions are determined by differences in the product-specific image of the given region, in the way consumers perceive it. Consumers' attitudes to the region of origin affect the perception of product attributes and the product-specific image of a certain region. In relation to this, the above mentioned authors offer a scale for measuring the product-specific image of a certain region and differentiate between two factors related to it – human and natural potentials.

Bearing the above in mind, two hypotheses were set initially within the research to be conducted within this paper:

*$H_1$: It is possible to identify the factor in the application of the measurement scale (within the domestic auditorium) of the product-specific image of Serbia pertaining to several categories of food products related to Serbia's human potential.*

*$H_2$: It is possible to identify the factor in the application of the measurement scale (within the domestic auditorium) of the product-specific image of Serbia pertaining to several categories of food products related to Serbia's natural potential.*

Based on the above factors, a model was also defined which will be tested in the survey within this paper:

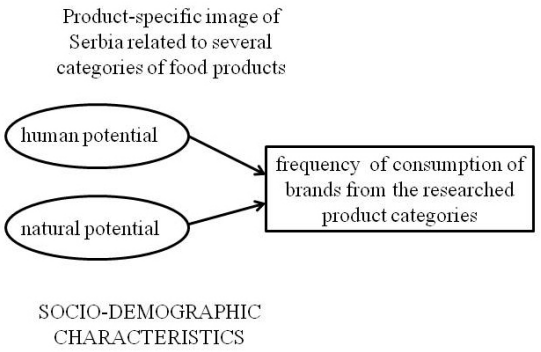


**Figure 1** Set research model
**Source:** The authors

In addition to the above, the following hypotheses were set:

*$H_3$: The mean score on the ungraded Likert scale for measuring the human potential of Serbia as a factor of the product-specific image of Serbia (among the domestic auditorium) in relation to several categories of food products is the closest to the 4$^{th}$ grade (the reply "I agree").*

*$H_4$: The mean score on the ungraded Likert scale for measuring the natural potential of Serbia as a factor of the product-specific image of Serbia (among the domestic auditorium) in relation to several categories of food products is the closest to the 4$^{th}$ grade (the reply "I agree").*

Bearing in mind that the socio-demographic characteristics of consumers are implicitly present as the determinant of macro-level in the theories most frequently used for explaining and forecasting the behaviour of food product consumers – Theory of reasoned action and Theory of planned behaviour (Aertsens, Verbeke, Mondelaers, & Van Huylenbroeck, 2009), the following hypotheses were formulated:

*$H_5$: The mean scores of the human potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products are statistically significantly different between respondents of different genders.*

*$H_6$: There is a statistically significant correlation between the respondents' age and the mean score of human potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products.*

*$H_7$: There is a statistically significant correlation between the respondents' education level and the mean score of human potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products.*

*$H_8$: There is a statistically significant correlation between the respondents' income and the mean score of human potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products.*

*$H_9$: The mean scores of the natural potential as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation of several categories of food products are statistically significantly different between respondents of different genders.*

*$H_{10}$: There is a statistically significant correlation between the respondents' age and the mean score of natural potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products.*

*$H_{11}$: There is a statistically significant correlation between the respondents' education level and the mean score of natural potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products.*

*$H_{12}$: There is a statistically significant correlation between the respondents' income and the mean score of natural potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products.*

In view of the supposed influence of the country's product-specific image for a given product on the frequency of purchase of this product, the last three hypotheses were set:

*$H_{13}$: The human potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products statistically significantly influences the frequency of consumption of brands from the researched product categories.*

*$H_{14}$: The natural potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products statistically significantly influences the frequency of consumption of brands from the researched product categories.*

*$H_{15}$: The variations of the human and natural potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products account for more than 50% variations in the frequency of consumption of brands from the researched product categories.*

The following section of the paper presents assumptions, research results and comments related to the tested hypotheses.

## 2. Materials and methods

### 2.1. The questionnaire

The questionnaire consisted of three sections. The first one gathers certain socio-demographic characteristics of respondents (the respondents' gender, age and number of years of education, and also average household income (the respondents were asked to take into account all sources of income – e.g. salaries, pensions, money received from relatives abroad, money from renting flats, etc.)).

The second section of the questionnaire offered the respondents a possibility to relate different brands from three product categories to a certain country of origin. Based on consultations with marketing experts from food industry, the following product categories were selected: fruit juice, beer, and bottled water. Moreover, both national and international brands present on the domestic market were selected.

The third section of the questionnaire was related to measuring the image of the country (to which the respondents related the offered brands) in relation to the production of the corresponding product category to which this brand belongs. Items from the scale used by Van Ittersum et al. (2003) were graded 1 to 5 on a Likert scale. The used items are shown in the section dealing with the testing of reliability and validity of the used scales. When translating the scales, back translation was used, i.e. the scales were first translated into Serbian and then back to English and compared to the originals. These two phases were performed by different experts in business English.

The fourth section of the questionnaire dealt with the frequency of consumption of brands within the three food product categories. Self-reported consumption frequency was used, which was regarded as a good predictor of actual consumption (Drewnowski & Hann, 1999). The respondents circled one of the provided numbers on a scale of 1 to 7 for two corresponding questions, with the following meanings of numbers: 1 – never; 2 – once in several months; 3 – once in several weeks; 4 – once a week; 5 – several times a week, 6 – every day; and 7 – several times a day.

Pretesting was conducted with students and did not indicate the need to reformulate the questionnaire.

## 2.2. Respondents

The marketing research was conducted on the territory of North Bačka and South Bačka Districts. Purposive convenience sample was used. The marketing research was conducted in December 2015. The sample consisted of 100 respondents, divided in terms of responding to questionnaires related to individual categories of food so that the questionnaire on fruit juices was replied to by 30 respondents, the questionnaire on beer by 37, and the questionnaire on bottled water by 33 respondents. It took the respondents about 10 minutes to fill in the questionnaire.

The frequency of consumption of brands from the researched categories of food products (unified by brands and categories) is shown in Table 1.

**Table 1** Frequency of consumption of brands from the researched categories of food products (unified by brands and categories)

| Frequency of consumption | Number of respondents |
|---|---|
| Never | 5 |
| Once in several months | 11 |
| Once in several weeks | 32 |
| Once a week | 10 |
| Several times a week | 26 |
| Every day | 11 |
| Several times a day | 5 |
| TOTAL | 100 |

**Source:** The authors

Furthermore, the sample comprised 49% women and 51% men. The average age of the respondent is 34.88 years (standard deviation 11.638), average number of years of education of the respondents is 14.88 years (standard deviation 2.463), while the average household income in respondents who answered this question (91% of them) is 86,769.23 dinars (standard deviation 39,428.72).

## 2.3. Procedures

The set criterion of accepting a particular questionnaire for data processing was relating one of the offered brands from three product categories to Serbia as the country of origin and correspondence of this correlation to the actual state. Given the fact that these criteria were met, all 100 questionnaires were included in processing, whereas replies to questions relating to brands from other countries were not taken into consideration, ranging outside the topic of this paper.

Taken the pertaining scale, its reliability was tested first, by using Cronbach's alpha, Cronbach's alpha if item deleted, and Corrected item-total correlation. The exploratory factor analysis by Maximum likelihood factor analysis and rotation method – Promax – was used for testing the validity of scales, where all the items were subject to unified testing, and it was defined that the number of factors to be extracted would be two. Before that, adequacy of conducting exploratory factor analysis was tested by Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity. After that, one-dimensionality of the scale was assessed by confirmatory factor analysis with appropriate model adequacy indicators (Chi-square/df, p value of model, CFI, GFI, AGFI, SRMR, RMSEA, PCLOSE), which were compared to the recommended values given by Hu and Bentler (1999). All of the above is in compli-

ance with recommendations given by Churchill (1979), Anderson and Gerbing (1982), Danes and Mann (1984).

The human potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several food products, as well as the natural potential of Serbia as a factor of Serbia's product-specific country image (among the domestic auditorium) in relation to several food products, were then viewed in the context of socio-demographic characteristics of respondents. As regards gender (dual-level category variable), the existence of statistically significant differences was established by using the independent samples T-test. As regards the description of correlation of the two above mentioned factors of Serbia's product-specific country image (among the domestic auditorium) in relation to several categories of food products with the respondents' age, number of years of education and monthly household income of subjective and objective knowledge, Pearson's linear correlation coefficient was used.

The influences of Serbia's human and natural potential as a factor of its product-specific country image (among the domestic auditorium) in relation to several categories of food products on the frequency of consumption of brands from researched product categories were researched by using multiple linear regression.

The data were processed in SPSS and AMOS statistical packages.

## 3. Research results

### 3.1. Reliability and validity of the scale used in the questionnaire

Table 2 shows testing the reliability of the used scale (the original questionnaire used wording that referred to only one of the three product categories, and the wording "that country" was used referring to the country to which consumers associate the offered brands, i.e. Serbia in this specific case.

**Table 2** Reliability of the used scale

| Items | Cronbach's alpha if item deleted | Corrected item-total correlation |
|---|---|---|
| *The country's human potential as a factor of its image in relation to the production of several categories of food products* | | |
| That country has sufficient quality of people for the production of fruit juices (or beer or bottled water). | 0.849 | 0.662 |
| People from that country have sufficient knowledge for the production of fruit juices (or beer or bottled water). | 0.840 | 0.734 |
| That country has the right people for the production of fruit juices (or beer or bottled water). | 0.834 | 0.775 |
| People from that country have sufficient expertise for the production of fruit juices (or beer or bottled water). | 0.837 | 0.754 |
| That country has sufficient tradition for the production of fruit juices (or beer or bottled water). | 0.849 | 0.662 |
| That country has appropriate culture for the production of fruit juices (or beer or bottled water). | 0.865 | 0.546 |
| That country has the right atmosphere for the production of fruit juices (or beer or bottled water). | 0.880 | 0.423 |
| *The country's natural potential as a factor of its image in relation to the production of several categories of food products* | | |
| That country has the suitable natural environment for the production of ingredients of fruit juices (or beer or bottled water). | 0.713 | 0.554 |
| That country has sufficiently clean environment for the production of ingredients of fruit juices (or beer or bottled water). | 0.796 | 0.331 |
| That country has appropriate type of soil for the production of ingredients of fruit juices (or beer or bottled water). | 0.669 | 0.687 |
| That country has sufficient sun for the production of ingredients of fruit juices (or beer or bottled water). | 0.693 | 0.608 |
| That country has sufficient precipitations for the production of ingredients of fruit juices (or beer or bottled water). | 0.723 | 0.527 |

**Source**: The authors

Cronbach's alpha was 0.870 for items related to the country's human potential as a factor of its product-specific country image in relation to several categories of food products, and 0.763 for items related to items to the country's natural potential as a factor of its product-specific country image in relation to several categories of food products. The possibility of increase in the value of Cronbach's alpha determined the omission of the last item from the first set of items. The value of corrected correlation of the second set of items with a total of assessed values of all items of the scale which decreases significantly in relation to the others (in accordance with: Churchill, 1979), with the possibility of notable increase in Cronbach's alpha in case of deletion of this question, has resulted in the omission of this item from further analysis.

**Table 3** Validity of the used scale

| Items | Factor 1 | Factor 2 |
|---|---|---|
| That country has sufficient quality of people for the production of fruit juices (or beer or bottled water). | 0.717 | 0.072 |
| People from that country have sufficient knowledge for the production of fruit juices (or beer or bottled water). | 0.934 | -0.091 |
| That country has the right people for the production of fruit juices (or beer or bottled water). | 0.888 | -0.037 |
| People from that country have sufficient expertise for the production of fruit juices (or beer or bottled water). | 0.900 | -0.033 |
| That country has sufficient tradition for the production of fruit juices (or beer or bottled water). | 0.428 | 0.343 |
| That country has appropriate culture for the production of fruit juices (or beer or bottled water). | 0.336 | 0.229 |
| That country has the suitable natural environment for the production of ingredients of fruit juices (or beer or bottled water). | -0.046 | 0.682 |
| That country has appropriate type of soil for the production of ingredients of fruit juices (or beer or bottled water). | -0.028 | 0.839 |
| That country has sufficient sun for the production of ingredients of fruit juices (or beer or bottled water). | -0.026 | 0.816 |
| That country has sufficient precipitations for the production of ingredients of fruit juices (or beer or bottled water). | 0.226 | 0.430 |

**Source**: The authors

The results of Kaiser-Meyer-Olkin test of 0.786, higher than 0.6, (Kaiser, 1970; 1974) and level of significance of Bartlett's Test of Sphericity of 0.000 (Bartlett, 1954) pointed to the adequacy of conducting exploratory factor analysis.

56.894% of the total variance was explained by conducting factor analysis with set identification of two factors.

Table 3 shows the pattern matrix of all unified items.

Loadings of the $5^{th}$, $6^{th}$ and $10^{th}$ item (lower than the recommended 0.55 for the sample of 100 respondents – Hair, Tathan, Anderson and Black, 1998), and their loadings in both factors resulted in their omission from further analysis.

After the completion of confirmatory factor analysis and correlating residuals in accordance with recommendation of modification, model adequacy indicators were obtained which, compared to recommended values (Hu & Bentler, 1999): Chi-square/df=1.833 (less than 3 good), p model value=0.0443 (should be higher than 0.05), CFI=0.976 (higher than 0.95 – excellent), GFI=0.947 (should be higher than 0.95), AGFI=0.866 (should be higher than 0.80), SRMR=0.0553 (should be lower than 0.09), RMSEA=0.092 (acceptable if it is between 0.05 and 0.10), PCLOSE=0.132 (should be higher than 0.05) show that the obtained model, as far as almost all indicators are concerned, is adequate.

**Table 4** Scale items remaining after testing reliability and validity

| Items |
|---|
| *The country's human potential as a factor of its image in relation to the production of several categories of food products* |
| That country has sufficient quality of people for the production of fruit juices (or beer or bottled water). |
| People from that country have sufficient knowledge for the production of fruit juices (or beer or bottled water). |
| That country has the right people for the production of fruit juices (or beer or bottled water). |
| People from that country have sufficient expertise for the production of fruit juices (or beer or bottled water). |
| *The country's natural potential as a factor of its image in relation to the production of several categories of food products* |
| That country has the suitable natural environment for the production of ingredients of fruit juices (or beer or bottled water). |
| That country has appropriate type of soil for the production of ingredients of fruit juices (or beer or bottled water). |
| That country has sufficient sun for the production of ingredients of fruit juices (or beer or bottled water). |

**Source**: The authors

Items related to the human and natural potential of Serbia as the factors of its image (among the domestic auditorium) in relation to the production of several categories of food products that remained after testing the reliability and validity are shown in Table 4.

All the remaining analyses were conducted on the above shown items.

### 3.2. The product-specific country image of Serbia related to food products

Table 5 shows the average of grades on a five-point Likert scale for measuring the human and natural potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched categories of food products.

In both cases, the average is the closest to the 4th degree, i.e. the reply "I agree".

**Table 5** Mean values of both factors

| Factors | Mean |
|---|---|
| *The country's human potential as a factor of its image in relation to the production of several categories of food products* | 3.785 |
| *The country's natural potential as a factor of its image in relation to the production of several categories of food products* | 3.98 |

**Source**: The authors

The following section views the above factors in the context of respondents' socio-demographic characteristics.

### 3.3. The food product-specific country image of Serbia in the context of respondents' socio-demographic characteristics

There is no statistically significant difference of mean grades on the scale for measuring the human potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched food product categories between men (M=3.7598; SD=0.83211) and women (M=3.8112; SD=3.98==): t(98)=-0315, p=0.753.

There is no correlation between mean grades on the scale for measuring the human potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched food product categories and the respondents' age, r=-0.015, n=100, p>0.05.

There is no correlation between mean grades on the scale for measuring the human potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched food product categories and the respondents' number of years of education, r=0.031, n=100, p>0.05.

There is no correlation between mean grades on the scale for measuring the human potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched food product categories and the respondents' household income, r=0.075, n=100, p>0,05.

There is no statistically significant difference of mean grades on the scale for measuring the natural potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched food product categories between men (M=3.9869; SD=0.84843 and women (M=3.9728; SD=0.71309): t(98)=0.90, p=0.928.

There is no correlation between mean grades on the scale for measuring the natural potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched food product categories and respondents' age, r= -0.155, n=100, p>0.05.

There is no correlation between mean grades on the scale for measuring the natural potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the researched food product categories and the respondents' number of years of education, r=0.031, n=100, p>0.05.

There is no correlation between mean grades on the scale for measuring the natural potential of Serbia as a factor of the product-specific country image of Serbia (among the domestic auditorium) in relation to the production of researched food product categories and the respondents' household income, r=0.024, n=100, p>0.05.

### 3.4. The impact of Serbia's food product-specific country image on the frequency of use of domestic food product brands

Table 6 shows the results of regression analysis.

**Table 6** Regression analysis results

| Model | Non-standardized coefficients | | Standardized coefficients | t | Sig. | Colinearity statistics | |
|---|---|---|---|---|---|---|---|
| | B | St. error | Beta | | | Tolerance | VIF |
| Constant | -2.792 | 0.601 | | -4.649 | 0.000 | | |
| Human potential | 1.098 | 0.134 | 0.578 | 8.169 | 0.000 | 0.853 | 1.172 |
| Natural potential | 0.648 | 0.140 | 0.328 | 4.639 | 0.000 | 0.853 | 1.172 |

In addition to the indicators of adequacy of application of regression analysis, it can be concluded that regression coefficients with both independent variables are positive and statistically significant. It must also be added to the above that the coefficient of determination is 0.586, and the adjusted coefficient of determination is 0.578.

## Discussion and conclusions

Multiple implications follow from the obtained research results. First, the first two hypotheses were confirmed, that is, it was possible to identify how the factor in the application of the measurement scale (among the domestic auditorium) of several food product-specific images of Serbia pertaining to the human potential of Serbia, as well as the factor pertaining to the natural potential of Serbia. Testing the reliability of the scale developed abroad resulted in its form suitable for application in the domestic conditions.

In addition to the above, hypotheses were also confirmed that the mean grades on a five-point Likert scale for measuring the human and natural potential of Serbia as a factor of product-specific country image of Serbia (among the domestic auditorium) in relation to the production of several categories of food products is the closest to the 4th grade (the reply "I agree"). The above suggests a positive evaluation of both factors of image by consumers in the domestic environment.

Hypotheses viewing the factors of image of Serbia (among the domestic auditorium) pertaining to the production of several categories of food products in the context of socio-demographic characteristics of respondents (gender, age, education, household income) were not confirmed. Although this result diminishes the possibility of segmentation and more precise identification of the target auditorium, from the aspect of potential use of appeal that would additionally improve the generally positive food product-specific country image, addressing the mass auditorium is also possible.

Finally, both factors of product-specific country image of Serbia (among the domestic auditorium) pertaining to several food products statistically significantly influence the frequency of consumption of domestic brands from the researched product categories, where they even account for more than 50% variations of frequency of consumption of brands from the researched product categories.

Generally, it can be concluded that it would be useful to additionally improve the product-specific country image of Serbia related to several food products for the purpose of increasing their consumption.

Future research should encompass a broader territory and a larger and more representative sample, so that it would be reasonable to define more precisely the implication management. Also, observations could encompass a larger number of brands from several categories of food products, and the analysis could also include certain other determinants of choice of domestic brands. SM

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# Internal Auditing and Risk Management in Corporations

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**Abstract**
Global changes force corporate leaders to observe their organizations through the strategic criteria, i.e. business risks they are encountering. New risks, including the new methods of risk assessments and management, have caused the reconsideration of internal auditing's purpose, scope and activities. Traditionally, internal auditors applied risk assessments by themselves in context of planning their audit engagements. However, modern risk-based internal auditing has changed its focus to the analysis and assessment of managers' role in the risk management process, i.e. to the adequacy of total risk management system. Adding value to the risk management process by internal auditing depends on the maturity of this process and moves from the consulting services aimed at establishing and improving risk management process to the assurance on the risk management status. This way, internal auditors provide support to all significant business activities and help their corporations to fulfil their missions.

**Keywords**
Internal auditing, risk management framework, maturity of risk management process, elements of auditing the risk management process.

## Introduction

Corporations' business environment is full of uncertainties (risks) meaning that they cannot have any guaranties for their survival and success. Consequently, a corporation has to manage its risks and the first step is to define its risk appetite. Such risk management approach, including the adequate risk management strategy, represents the necessary precondition for the achievement of the corporation's goals. It enables a corporation to identify and understand its risk exposure, to create and implement the efficient solutions for preventing losses and/or mitigating the negative impact of risks.

Therefore, it is not unusual that internal auditing, being focused on supporting the whole governance process, has become more relevant recently. As a response to the above mentioned this business function has passed through a severe metamorphosis. In the beginning, it was focused on formal and detailed reviews of appropriateness, correctness and reliability of accounting information, but recently it has become a proactive function delivering two types of services. Through the reasonable *assurance* on the efficiency of processes of good corporate governance, risk management and internal controls, but also the *consulting services* aimed at the improvement of all key business areas, internal auditing has been adding value to the quality of whole governance process and therefore enables a corporation to achieve its goals and reduce its risks exposure. (Tušek, 2009).

## 1. Shift in internal auditing focus

In order to reach the level where it is now, internal auditing has passed a long path of evolution through constant adaptation to the current needs

of management and ways of doing business. It is important to keep in mind that from the first definition of internal auditing that was published by Institute of Internal Auditors in 1978, and for the next two decades it was mainly focused on internal controls. Internal auditing based on traditional approach provided the support to a company through independent and objective assurance that the internal controls function in a way as it is required, through the support in better creation and functioning of control system, discovering the internal irregularities and through the support in maintaining better information of relatively isolated senior management (Ratliff, Beckstead, 1994).

Today, it is especially important for internal auditing to be focused on risks or adding value through providing the information needed to recognize, comprehend and assess potential risks. The main contribution of such internal auditing focused on risks – risk-based approach – is that the information, provided as an input to the decision making process, are more valuable to the management just because of the way they are collected. Although the risk has always been a part of internal auditing process, new trends in auditing have brought it to the center of its focus. In traditional approach, internal auditing was focus of risks for the purpose of assessing their own auditing risks. However, in the risk-based approach the focus has been transferred on the analysis and assessment of the *management's role in the risk management process*.

The main characteristics of the old and new internal auditing paradigm and their differences are presented in Table 1.

**Table 1** Shift in internal auditing paradigm

| Characteristics | Old paradigm | New paradigm |
|---|---|---|
| *Internal audit focus* | Internal controls | Business risks |
| *Internal audit response* | Reactive, acting after the events, discontinued, observers in defining strategic plans | Obligatory, in real time, continual supervision, participation in defining strategic plans |
| *Internal audit assessment* | Risk factors | Planning by scenarios |
| *Internal audit testing* | Significant controls | Significant risks |
| *Internal audit methods* | Emphasis on integral and detailed control testing | Emphasis on the significance of coverage of wide business risks |
| *Internal audit recommendations* | Internal controls: Strengthen Cost-benefit relation Efficient/effective | Risk management: Avoid/diversify risk Share/transfer risk Control/accept risk |
| *Internal audit reporting* | Related to controls | Related to risk processes |
| *Internal audit role in the company* | Independent assessment function | Integration with risk management and corporate governance |

**Source:** Selim & McNamee, 1998

The goal of risk-based auditing is to provide the assurance to the management that (Institute of Internal Auditors UK and Ireland, 2003):

- the risk management processes which management has put in place within the organization (covering all risk management processes at corporate, divisional, business unit, business process level, etc.) are operating as intended,
- these risk management processes are of sound design,
- the responses which management has made to risks which they wish to treat are both adequate and effective in reducing those risks to a level acceptable to the board,
- and a sound framework of controls is in place to sufficiently mitigate those risks which management wishes to treat.

The role of the internal auditing in the risk management process has been defined in the International Professional Practices Framework (IPPF). According to Standard 2100 – Nature of Work (The Institute of Internal Auditors, 2012, p. 11), being a part of Performance Standards, internal auditing is explicitly required to contribute to the improvement of risk management. When assessing the adequacy of risk management systems, firstly internal auditors should determine if the key stakeholders or individuals included in the governance process, including the board of directors and auditing committee, understand the methodology of running the risk management process which is specific for the company. Only if this precondition has been met internal auditors may perform their role in providing opinion on the adequacy of risk management process.

## 2. Risk management framework

Before starting any auditing engagement the first step is to get to know the business environment, conditions and factors affecting the subject of auditing. Considering the risk management process, each internal auditor has, in the first place, to become familiar and comprehend the risk management framework. This framework encompasses all those variables which directly or indirectly affect the risk management process. The risk management framework is multifaceted and according to Spencer Pickett (2005) includes five levels as described below.

1. LEVEL 1: Factors of external and internal environment

- *External global and market developments* such as changing interest rates, international developmnets, fluctuating movement of capital, etc.
- *Statutes, regulations, codes and guidance* – can be generic (common for all corporations) or industry specific.
- *The mission* – one of most important internal factors affecting the risk management process since it defines the nature of corporation's business and its objectives.
- *The chief executive office (CEO) and board* – except for the general overseeing the governance process, the most important contribution of the board is formulation of risk management strategy which should take into account global market forces and the relevant regulatory framework specific for each individual organization (COSO, 2004).
- *Senior management* – should insure that the staff, systems and budgets they are responsible for enabling the implement--ation of risk management strategy.

2. LEVEL 2: Isolation and understanding risk

- *Active stakeholdes* – those stakeholders who have a direct influence over an organization and in the case of corporations they include: shareholders, investors, lenders, associates, partners, employees and others having an improtant influence on the corporation;
- *Passive stakeholders* – do not have a direct influence over the corporation and its decision makers but they affect the way the corporation is seen by the public (e.g. local communities, the media, environmental groups and people concerned about the behavior of large corporations);
- *Strategic risks* – market changes, compliance risk (risk of failing to comply with varous laws and regulations) or failure in meeting the needs of stakeholders, all meaning that the stated mission may not be achieved;
- *Operational risks* – risks of direct or indirect losses as a result of unadequate or weak internal processes, people and systems or external events (Lam, 2003, p. 210);
- *Risk maps* (financial, business, project and compliance) – are used to follow up the impact of strategic and operational risk on different part of an organizations through the classification of all risks in these four categories.

3. LEVEL 3: Risk appetite and factors affecting risk appetite

Risk appetite defines the level of risk an organization is willing to accept and depend on: *capability* of the corporation to understand and manage its risks, *commitment* to the risk management concept, *choices* made or not made in order to achieve business success, *consistency* in risk management approach, *context* of the way an organization operates and deals with its customers and other stakeholders, *challenges*, *communication*, *clarity* of objectives, accountabilities and risk triggers, *controls*, *key values* and *corporate culture*.

4. LEVEL 4: Elements of risk management process

According to enterprise risk management (ERM) model designed by COSO (2004), borad of directors is responsible for the corporate governance, while senior menagement is responsible for risk management process. This means that the senior management is responsible for: formulating business objectives, risk identification, risk assessment, risk management, establishing key performance indicators and disclosures. After the business objectives are formulated and all risks identified, it is necessary to assess these risks as regards their impact on an organization's ability to achieve its objective. One the other hand, it is also important to assess the

likelihood of risks to occur unless managed properly.

Depending on how each risk has been assessed, management will decide on risk management approach. There are many possible responses to different types of risk, but four of them, which are most commonly used, include: *avoidance, reduction, sharing and acceptance* (COSO, 2004, p. 53).

Action plans, resulting from the risk assessment process, are aimed at strenghtening controls and improving the way work is planned and performed. Action plans should consolidate all these measures by including the key performance indicators – specific objectives assigned to individuals and/or teams.

Finally, considering the obligations assumed from corporate accountability, i.e. transparency, it is very important to provide adequate disclosers relating to the risk management process.

5. LEVEL 5: Ensuring the continuity of enterprise risk management

In order to ensure the continuity and sustainability of whole ERM framework it is necessary to provide: internal controls, monitoring, validation, improvement and continual integration (Pickett, 2005).

A good ERM process incorporates a good system of *internal control* and a mechanism to update controls as and when risks change in type, impact or likelihood.

*Monitoring* is necessary to keep the risk management process always up to date and alive. It must be reviewed to ensure that it still does the jos as intended.

*Validation* ensures a good way of documentation of both: *risk management policies* formulated by the board or *risk management activities* performed on lower levels of an organization. Proper documentation makes monitoring easier to implement and more effective and efficient.

Considering constant changes in external and internal environment, risk management process has to be alive and always developing, *improving*. Therefore, risk management must be set within an environment ready to learn and evolve. If risks are observed as opportunities to learn a lesson and adopt something new and useful, then the whole risk management process reaches a new dimension.

Finally, probably the most important precondition to ensure continuity, efficiency and effectivness of the risk management process is its *integration* into the actual business systems and work methods. Risk management process should be the responsibility of all employees and an integral part of the way people are doing their work.

It can be noticed that the role of internal auditing is mostly significant in this fifth level of risk management framework. Internal auditing as a function of internal supervision ensures the *monitoring* of the risk management process and *documents* the risk management process by its engagements and by its findings. Also, internal auditing *improves* the risk management process by its recommendations and makes the *integration* of the risk management process easier through number of consulting services which help different levels of organisation to become familiar with the risk management methods and more risk aware.

## 3. Internal audit's role and risk management maturity

According to the official definition of internal audit, formulated by the Institute of Internal Auditors (the IIA), the role of internal audit is to evaluate and improve risk management process where assurance services of internal audit are focused on the evaluation while consulting services are aimed at the improvement of the risk management process (the Institute of Internal Auditors, 2004). The role of internal audit moves between these two types of services – from providing assurance to the board, auditing committee and senior management about the state of risk management to consulting with management to help them improve this process. Which roles the internal audit will assume in each case depend on the maturity of risk management process and the phase it currently passes through.

The extent of internal audit's consulting in ERM will depend on the other resources, internal and external, available to the board and on the risk maturity of the organization and it is likely to vary over time. Internal audit's expertise in considering risks, in understanding the connections between risks and governance and in facilitation mean that it is well qualified to act as champion and even project manager for ERM, especially in the early stages of its introduction. (The Institute of Internal Auditors, 2004, p. 5)

### 3.1. Determining risk management maturity

Internal auditors simply have to see how they can add the most value in the context of the need to evaluate and improve risk management process. Thus their role can move in the following range (Institut internih revizora, 2009, p. 138):

- no role
- auditing the risk management process as part of the internal audit plan
- providing active, continuous support and involvement in the risk management process, such as participation on oversight committees, monitoring activities and status reporting
- managing and coordinating the risk management process

There are many ways to assess in which risk management maturity phase is an organization currently. One diagnostic tool has been described by Basil Orsini that contains five levels of progressively mature organizational behavior. The various levels of risk maturity are set with five performance indicators (Orsini, 2002):

1. *Organizational Culture* (risk management is performed at every organizational level and is integrated with the organization's management practices; roles and responsibilities are clear; risk management reflects ethics and values as well as sensitivity to legal and political considerations);
2. *Leadership and Commitment* (senior management is committed to establishing risk management at all levels of the organization; there is a multidisciplinary perspective for assessing and responding to strategic and operating risks; a leadership role of senior management);
3. *Integration with Departmental Management Practices and System* (risk management is integrated into business planning and decision-making at the corporate and operational levels, risk measures results have been monitored over time; integration into quality service initiatives; Online access to management information; organization – idea communication);
4. *Risk Management Capability* (continuous risk management training; departmental management tools and techniques are integrated with risk management techniques; multidisciplinary teams provide advice on risk management issues);
5. *Reporting and Control* (scanning of external opportunities and threats; the control environment is linked to departmental objectives and risk appetites and tolerances; there is an accepted level of documentation; measurement and monitoring are in effect).

### 3.2. Internal audit's input in early stage of risk management maturity

If the risk management process has not been developed in an organization, it is quite understandable to define the audit input in terms of helping to start the risk management process. Although there may be much flexibility in establishing an early audit role, it is very important to agree upon this role with the board and auditing committee, i.e. to put it in an internal audit's charter. In the stage of establishing the risk management process, internal auditors will not be able to perform all the procedures defined by the guidelines of the IIA (see: The Institute of Internal Auditors, 2004). Therefore, the early role of internal audit can be broken down into four basic elements as follows (see: Pickett, 2005):

1. *Facilitation of risk management process*. It assumes the support in starting the process and generally includes risk education by organizing a number of workshops where employees become familiar with the basic risk management approaches and techniques. In the essence, such support should help people understand that they have control over many aspects of their work and to understand the risks affecting the achievement of their business objectives. Also, it is very important to keep in mind that internal auditor should never be responsible for risk management since that is the management's responsibility.
2. *Coordination and Leadership*. This means that internal auditors should be risk champions by promoting the benefits of risk management process, educating an organization's management and staff in the actions they need to take to implement it and by encouraging and supporting them to take these actions.
3. *Help, Support, Design and Implementation.* In an early stage of risk management process internal audit's role can be proactive in a way of helping management to set up the right structures, policies, communication

channels and specific processes that support good risk management and therefore good business management. Activities which can be assumed by internal audit, without taking the responsibility for the risk management process, include: facilitating identification and evaluation of risks; coaching management in responding to risks; coordinating ERM activities; consolidated reporting on risks; maintaining and developing the ERM framework; championing establishment of the ERM; developing risk management strategy for board approval (The Institute of Internal Auditors, 2004, p.1).

4. *Nonaudit Tasks*. In an early stage, when roles and responsibilities have not been clearly defined yet, the board members may assign some tasks to internal audit and consider that their job has been done. However, the IIA has made clear that this trap should be avoided by issuing suitable guidance on the roles that internal auditors should not undertake such as: setting the risk appetite, imposing risk management processes, providing management assurance on risks, taking decisions on risk responses, implementing risk responses on management's behalf, being accountable for risk management (The Institute of Internal Auditors, 2004, p. 2).

### 3.3. Maturity Stages of Risk Management Process

According to Spencer Pickett (2005), risk management is developing through four stages until reaches its full maturity. These stages are as follows:

1. *Risk Awareness* – considering the internal audit's scope of work (covering all business activities and all processes), its place is quite suitable for spreading the message of risk management importance to the executives and the throughout the entire organization. Risk awareness is being promoted in order to insure that everybody in organization: identifies proactively key business risks, thinks seriously about the consequences of the risks he/she is responsible for and informs higher and lower levels of organization about those risks worth of their attention (Lam, 2003).
2. *Design* – In this stage, internal auditors can add value in a way that they will investigate best practices of risk management in similar organizations as well as in other types of organizations. According to the IIA guidance, depending on the size and complexity of the organization's business activities, risk management processes can be: formal or informal, quantitative or subjective, embedded in the business units or centralized at a corporate level (Institut internih revizora, 2009, p. 138). Risk management process that an organization will adopt should be created in a way that it suits the culture, management style and business objectives of the organization. Thus, in the case of smaller and not very complex organizations, they can establish informal risk committee which will occasionally consider the organization's risk profile and initiate actions accordingly. Internal auditor's task would be to determine if the adopted methodology is comprehensive enough and suitable for the nature of organization's business activities (Institut internih revizora, 2009, p. 139).
3. *Integration* – In this stage, risk management depends on establishing the right structures and business culture. Integration means that risk management process is being seen as a holistic approach applied systematically in order to provide clear accountabilities and effective decision making. It is about: setting good strategy that has been properly thought through, building and maintaining the set of business values that can be translated into policy and then into performance targets and finally into appropriate action.
4. *Review* – Review, monitoring and managerial certification can be established only when a risk management system is in place. This is the stage when internal auditors can start to reduce the extent of their consulting services and start to assume their core assurance role. Assurance services can also be delivered by external auditors and independent experts, but in the case of internal auditors the IIA guidance suggests there are three areas where these assurances may be provided (The Institute of Internal Auditors, 2004, p. 4):

- Risk management processes – both their design and how well they are working
- Management of those risks classified as key – including the effectiveness of the controls and other responses to them
- Reliable and appropriate assessment of risks and reporting of risk and control status.

### 3.4. Internal audit's input in mature stages of risk management process

Naturally, as the risk management process evolves the role of internal audit changes and its focus shifts from the consulting services to assurance services. In mature stages of risk management, internal audit can still add value through some kind of consulting services such as process facilitation, training and providing advice, but it is more and more oriented to the formal monitoring and objective assurance.

In a mature risk management environment the focus of internal audit work may be (Institute of Internal Auditors UK and Ireland, 2003):

- Auditing the risk management infrastructure, for example, resources, documentation, methods, reporting
- Auditing the whole system of internal control for the complete organization and for individual departments
- Carrying out individual audit assignments that are predominantly about specific risks
- Where a number of risks are controlled through a common system or process, it may be appropriate to perform a combined audit of that system or process.

The result of such a process is expressing the assurance that risks have been managed in a way that is acceptable for the organization, regarding the previously adopted risk tolerance, or facilitating the introduction of necessary improvements relating to the risk management process. According to Griffiths (2006), risk based internal auditing should result in assurance that:

- The management has identified, assessed and responded to risks above the risk appetite
- The responses, especially the system of internal controls treating the risks, are effective in reducing the inherent risks to below the risk appetite
- Where residual risks are above the risk appetite, action is being taken to reduce them to within the risk appetite, or the board has been informed that they will be tolerated, transferred or terminated
- Risk management processes are being monitored by management to ensure they continue to operate effectively.

## 4. Developing the internal audit's approach

Performance standard 2100 – Nature of work states that: "The internal audit activity must evaluate and contribute to the improvement of governance, risk management, and control processes using a systematic and disciplined approach." (The Institute of Internal Auditors, 2012, p. 11).

Defined like this, scope of internal audit's work can be perceived from the practical angle by looking how internal auditors really add value to the risk management process. In practice, internal auditors add value to the risk management environment by performing following functions (Beumer, 2004):

- Reviewing risk management processes and internal control systems across the organization
- Identifying business risks and assessing internal controls designed to mitigate those risks in terms of reliability, integrity, compliance, protection, efficiency and effectiveness
- Educating the organization with respect to the development and use of cost-efficient risk management processes and the promotion of best practices through internal auditing's role as a change agent.

This focus on risk permeates all aspects of audit work and is nothing new. Strategic reviews, overall assessments of risk management and detailed assessment of particular aspects of risk management framework are all valid audit tasks. Thus, internal auditors support all the relevant business activities and enable an organization to fulfil its mission.

The shift that internal auditing has made over the years has been astonishing. The way it has developed to respond to the growing interest in risk management can be seen in stages that internal audit has been going through (Sobel, 2004):

1. control-based auditing
2. process-based auditing

3. risk-based auditing
4. risk management-based auditing.

In contrast to the risk-based auditing, this new approach – internal auditing based on risk management – expands its focus on key business objectives, management's risk appetite, key performance indicators and risk management capabilities. Instead of being primarily focused on mitigating risks to an acceptable level, in this new approach, internal auditing also considers optimizing key risks where necessary to achieve business objectives. This way, risk management-based auditing becomes a key link of successful risk management process.

The approach of risk management-based internal auditing generally includes following steps:

1. creating an appropriate audit charter
2. creating a risk-based audit plans
3. developing preliminary surveys in audit areas that have been prioritized by risk-based audit plans
4. reviewing the risk registers in use (if any) in the areas under review
5. reporting on risk management and control processes

### 4.1. Audit charter

Audit charter is the document that defines the position of internal auditing within the context of the risk management policy (approved by the board of directors) and the needs of the audit committee. Internal audit must fit into what is best for specific organization and an audit charter is exactly the document defines its roles and responsibilities. Preparation and application of the internal audit charter should integrate two key factors:

1. board's approach (policy) relating to the risk management, and
2. audit committee's expectations with regards to the internal auditing activities.

Considering these two factors, internal audit charter should enable internal auditors to provide a full range of important services such as following (Pickett, 2005):

- advising the audit committee on the way it is discharging its areas of responsibility
- assisting the board in setting up its published disclosures infrastructure
- encouraging dialogue with key stakeholders so that, wherever possible, their concerns are built into the risk management process
- helping management establish a reliable risk management process and effective internal controls
- promoting compliance with legal and regulatory requirements
- providing assurance and consultancy services that fit in with the other tasks.

Which of the above mentioned activities will be included in an audit charter depend on the specifics of each organization but also on the maturity of its risk management process.

### 4.2. Risk-based audit plans

The starting place for risk-based audit plans is the 'audit universe', i.e. the list of all those aspects of the organization that can be translated into auditable areas and form the basis of individual audit assignments. Since the audit universe interrelates with the organization's strategic plan (which has been created considering the environment in which the organization operates), it will certainly consider and reflect the overall business objectives but also will be influenced by the results of the risk management process.

When creating their audit plans, internal auditors may and should use all the outputs of the risk management process within the organization, so long as this process is in place and is reliable. One of powerful additional tools that can be used by internal auditors in this case is the corporate risk register. However, risk assessment processes of the internal audit planning process are not sufficient to constitute a proper organizational risk management process (see: Joint Technical Committee, 2004).

It is not excluded that the risk-based audit plans include a wider vision of the organization than might appear at first sight. For example, the auditor may argue that the risk that management, associates, partners and employees may be involved in fraud and abuse should also be included on any corporate risk register. Many feel that ethics is so important that it should be included in the planned audit coverage (Pickett, 2005).

In organization where risk management is not developed at all, it is difficult to use the corporate risk register or other outputs of the risk management process to create the risk-based audit plans. In this case, internal auditing will focus on establishing the process and its running, but will also have to develop a planning mode that can be used to support the annual audit plan. There is a variety of risk models assisting the chief audit executive

in prioritizing potential audit subject areas. Most risk models utilize risk factors such as: financial impact; asset liquidity, management competence, quality of internal controls, degree of change or stability, time of last audit engagement, complexity, employees and government relations, etc. (Institut internih revizora, 2009, p. 124).

Finally, one should keep in mind that the risk-based audit plans have always to be updated in order to be aligned with the direction of the organization.

### 4.3. Preliminary survey

Preliminary audit survey represents an attempt to perform some background work so that audits from the risk-based annual plan can be properly structured and planned, i.e. so that long-term plans can be translated into the assignment plans. Besides the ERM framework that significantly determine the way of performing the preliminary survey, there are two additional tools facilitating these surveys – *control and risk self assessment (CRSA) and questionnaires*.

*ERM framework* provides initial information that internal auditors need to perform preliminary survey, but, at the same time, these auditing activities will help auditors to determine if the ERM really fulfils its purpose or not.

Internal auditors may also use *CRSA* to facilitate and progress the audit process. *CRSA* has become really popular and accepted practice recently and it has been used in private/profit but also in public and non-profit sector. The reason why it has become so popular is that it refers to people that live in real world and deal with real problems by using their own knowledge and capabilities. But maybe the reason is also that finally it has become clear that the main cause of organizations' success is people and not the procedures (Sawyer, Dittenhofer, & Scheiner, 2003).

Internal auditors can use the *CRSA* in two ways. The first is to rely on any CRSA events that have recently been employed but the staff from the area that is being reviewed. If this process is sound and well documented, the auditors may be able to use the outputs to drive the terms of reference for the proceeding audit. In the other case, it is the internal auditor who organizes the CRSA workshop by getting key people from the area under review together and then he uses the outputs form this audit-driven CRSA workshop to develop and finalize the terms of reference for the audit.

The second tool internal auditors may use in their preliminary survey relates to *questionnaires* that can be sent out to people in the area under review before the audit is started. The idea is to gather relevant information about the control status and the level of control awareness and to use these findings to help focus the planned audit. Questionnaires, followed up with a few interviews, can be used to assess the state of control awareness, and based on this assessment internal auditors can also plot trends over a period to see if this awareness is improving or not. Based on questionnaires results, the audit work can then be focused on those areas where control cultures are poor.

### 4.4. Assignment plan and business risk register

According to performance standard 2200, internal auditors must develop and document a plan for each engagement, including the engagement's objectives, scope, timing, and resource allocations (The Institute of Internal Auditors, 2012). This plan sets out exactly what will be done and who will do what. In the *assignment plan*, internal auditors must determine appropriate and sufficient resources to achieve engagement objectives based on an evaluation of the nature and complexity of each engagement, time constraints, and available resources (Performance Standard 2230, The Institute of Internal Auditors, 2012).

When considering assignment plans for evaluating risk management process *business risk register* has a crucial role. Business risk register can be created through the reviews by the manager and management team, or the risk workshops where the teams reporting up to the manager discusses the risks, or through an assessment of intelligence and trend analysis. It is basically a data schedule that helps understand the whole risk profile of an organizations by including some key elements such as: risk description, type of risk (financial, operational, project...), risk impact (its consequences), risk likelihood, level of risk (the result of multiplication of previous two items), description of controls (if any) established to mitigate the risk, actions planned as a response to the risk, identification of stuff responsible for the risk management.

Before making a final opinion on total effectiveness of risk management and control processes, internal auditors should provide answers to three more questions (Institut internih revizora, 2009, p. 143):

- Were significant discrepancies or weaknesses discovered and other assessment information gathered?
- If so, were corrections or improvements made after these discoveries?
- Do the discoveries and their consequences lead to the conclusion that there is a pervasive condition resulting in an unacceptable level of business risk?

To answer these questions internal auditors should provide (gather and create) extensive documentation in form of *audit evidences*. The essence of this evidence is to help an auditor to reach the confirmation whether current business activities, i.e. the elements of the adopted ERM framework, are effective of not.

If there is no business risk register in the organization, internal auditors' task is to provide consulting to the management in this respect. In the meantime, they have to make total assessment of risks and controls for the area under the review by themselves.

### 4.5. Reporting on risk management and control processes

Communicating the status of risk management process includes the assessment, i.e. opinion on efficiency and effectiveness of internal controls in business segment under the review. Communications must include the engagement's objectives and scope as well as applicable conclusions, recommendations, and action plans (Performance Standard 2410, The Institute of Internal Auditors, 2012). Also, the audit reports have to meet certain quality standards meaning that they must be accurate, objective, clear, concise, constructive, complete, and timely (Performance Standard 2420, The Institute of Internal Auditors, 2012).

Although the format and contents of final audit engagement report might differ depending on the organization or type of engagement, it should always contain at least three elements:

1. *Purpose of engagement* – describing the engagement objectives and informing the readers on the reasons why the audit engagement is being performed and what is expected from it
2. *Scope of engagement* – specifying audit activities and, if appropriate, providing the information on time period covered by the engagement
3. *Engagement results* – including the audit findings, conclusions, opinions, recommendations and action plans.

According to the IIA Practice Advisory 2410-1 (Institut internih revizora, 2009), e*ngagement observations and recommendations* emerge by a process of comparing what should be with what is. Whether or not there is difference, the internal auditor has a foundation on which to build the report. When conditions meet the criteria, acknowledgment in the engagement communication of satisfactory performance may be appropriate. Observations and recommendations should be based on the following attributes (Institut internih revizora, 2009, p. 174):

- **Criteria**: The standards, measures or expectations used in making an evaluation and/or verification (what should exist)
- **Condition**: The factual evidence that the internal auditor found in the course of the examination (what does exist)
- **Cause**: The reason for the difference between the expected and actual conditions (why the difference exists)
- **Effect**: The risk or exposure the organization and/or others encounter because the condition is not consistent with the criteria (the impact of the difference).

*Conclusions and opinions* are the internal auditor's assessments on the effects that auditing observations and recommendations have on the area subject to audit. *Conclusions* may include the whole range of engagement aspects or some specific aspects of engagement. They can include even the conclusions on whether the business or program objectives are in line with the organization's objectives, if the organization's objectives have been achieved and if the business activities under the reviews function as it was planned or not. *The opinion* may include the overall assessment of controls or just the assessment of controls in the area under the review, or it can be limited to some specific controls or aspects of engagement.

Internal auditor's report can also include the *recommendations* for improvements, *praises* for good performance and *correction measures*. During the discussions with the 'engagement client', internal auditor should try to reach the agreement on the engagement results and any action plan that is needed to improve the business operations. If there is a disagreement between internal auditor and the engagement client, the report should con-

tain both standpoints and the reasons for disagreement.

After the engagement is finished, chief audit executive submits a signed report. Report summaries, specifying only the engagement results, are suitable for senior management (above the engagement client) and can be submitted separately or together with the final report.

The internal auditing report is the final products of the whole auditing process and should be a confirmation of the internal audit's contribution to the whole risk management process and a proof that internal auditing has done its job in order to add value to the organization.

## Conclusion

Corporate governance represents the mix of numerous aspects which goal is to meet the characteristics and achieve the objectives of corporate governance. The first and basic goal is to fulfil the expectations of all stakeholders and that is very often difficult to realize because of their conflicts of interests. Therefore, internal auditors should not only be familiar with all the characteristics and aspects of corporate governance, but they are also expected to evaluate the systems that have been established to achieve the goal of corporate governance. Therefore, internal auditors add value to the business by providing the assurance to the stakeholders that the systems, established to insure their expectation and interests, are efficient and effective.

When considering the way internal auditing adds value to the risk management process in corporations, we can conclude that its role varies among organizations and depending on the maturity of risk management process. Therefore, the first task of internal auditing is to determine the level of risk management maturity and to forecast the trend of the risk management development. Then, internal auditing starts to deliver its services on the current level of risk management maturity by providing adequate support in establishing the structures and risk management approaches (consulting services in early stages). As an organization becomes more and more mature and capable to manage its risks, internal auditing focuses more on providing objective assurance in contrast to the earlier role of business consultant, educator and facilitator.

Internal audit's approach based on the risk management process enables it to be a pioneer of these processes by assessing risks in all areas and providing the timely signals to the board and management in order to add value to the organization and help achieving its goals and objectives. SM

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# Micro Accounting Entities in the Slovak Republic – A Year After an Introduction

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**Abstract**
This paper is focused on hypothesis that small businesses identified as a micro accounting entities by the national accounting regulation in The Slovak Republic choose to present its annual financial statements in simplified form rather than in the full format reporting available for all accounting entities. Since 1 January 2014 business accounting entities keeping accounts in the double-entry bookkeeping system meeting certain size criteria qualified as micro accounting entities can choose to use simplified accounting procedures and to present more simple set of forms for annual financial statements. This hypothesis will be tested on data obtained from the Registry of financial statements provided by The Ministry of Finance of The Slovak Republic. Results will provide answers as to whether an introduction of simplified accounting procedures and more simple forms for annual financial statements was accepted by businesses or not.

**Keywords**
Financial statements, financial reporting, analysis of financial statement, micro accounting entity.

## Introduction

The main objective of any accounting system is to provide information. This goal is achieved by presenting financial statements of an accounting entity with purpose to provide information about the financial position, performance and changes in financial position of that entity which is useful to a wide range of users in making economic decisions. According to Šlosárová (2014), Tumpach (2006), Mackenzie et al. (2014), Máziková & Ondrušová (2014) financial statements are designed to provide useful information to various users. Not all information needs can be met by financial statements. There are needs which are common to all users while each group of users has specific needs for information, which are often not in mutual contradiction. The accounting rules in The Slovak Republic are set in a very detailed way by the government which on its own is one of the parties interested in information provided by the financial statements. To meet the definition of financial statements, available information in each country has to be standardized and provided by financial reporting in the form of general financial statements.

Based on literature Šlosárová (2014) regulation of keeping accounts and financial reporting can be achieved by: (a) regulation of financial reporting; (b) regulation of keeping accounts and financial reporting (p. 40). Legal regulations regarding accounting and financial reporting have been prescribed in a very detailed way for both, keeping accounts and for financial reporting in the Slovak Republic. The regulation of accounting in general is provided by the Act on Accounting (2013) which defines the extent of keeping the accounts, and specify: accounting entities, subject of accounting, methods of accounting, period of keeping the accounts, responsibilities and obligations when keeping accounts, definition of accounting documents, accounting entries, accounting ledgers, requirements regarding the financial statements and consolidated financial statements, methods of publication, the duty to have financial statements verified by an auditor, the option and obligation of using the International Financial Reporting Standards. Detailed regulation of keeping accounts and requirements regarding the content and form of the financial statements are provided by Ordinances issued by the Ministry of

Finance of the Slovak Republic. Since its introduction in 2002, the Act on Accounting (2002) was designed to provide legal guideline for all accounting entities regardless their size or needs. The set of financial statements designed by the Ministry of Finance of the Slovak republic was provided by Ordinance on financial statements which were compulsory for all business accounting entities keeping accounts in double-entry bookkeeping system. The complete set of financial statements includes: balance sheet, statement of profit or loss and notes.

Financial accounting during an accounting period is regulated by the Ordinance providing details concerning accounting procedures and the framework chart of accounts for businesses using double-entry bookkeeping system issued by the Ministry of Finance of The Slovak Republic and all accounting entities shall be required to adhere thereto. Here follow few figures just to illustrate a level of accounting regulation in The Slovak Republic:

- number of accounts reported in the balance sheet: 150
- balance sheet length: 145 lines (including 24 group totals)
- number of accounts reported in the statement of profit or loss: 98
- statement of profit or loss length: 61 lines (including 14 group totals).

Simply by comparing number of accounts reported in the balance sheet (150) with number of lines in the balance sheet (101) we reach an approximate ratio of 1.24 account per 1 line reported in the balance sheet and the same analyzes can be done with the statement of profit or loss with results approximately 2.1 account reported per 1 line. Such strict regulation is even more complicated, setting rules to break each account into its analytics according to more detailed reporting needs. So instead of providing basic guidelines, regulators set a very strict policy on accounts numbering and reporting resulting in a set of financial statements of length of 9 pages plus preface to each part of the financial statements extending the complete set of the balance sheet plus the statement of profit or loss to 12 pages. Comparing such a set of financial statement forms, which is compulsory for all financial statements prepared in accordance with national accounting regulation in the Slovak Republic, with obligations set by internationally accepted accounting regulations (such as US GAAP, IFRS, European directives) could provide false conclusion that international regulations provide insufficient or irrelevant information or that the Slovak legislation should be promoted to globally accepted standard for its nature of providing relevant information. The truth is the opposite. According to study made on a sample of 1,687 companies in a period of 3 years by Tumpach and Baštincová (2014) some 16 % of lines in the compulsory balance sheet form have 0 balances. It has been proved that governmental intervention, as a preferred user of information provided by the financial statements, could potentially increase the opportunity costs caused by the imperfect information by increased bureaucratic burden and by formal compliance (p. 656).

## 1. Micro accounting entity

Based on the implementation of Commission Recommendation (2003/361/EC) of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (2003, p. 39), the micro accounting entity was introduced into the Act on Accounting (2013) in year 2013 effective from 1 January 2014 by the amendment to the Act on Accounting for an accounting period commencing on or after 1 January 2014. One of objectives by this introduction was to reduce administrative burden of accounting regulations for small businesses and to simplify accounting procedures and annual financial reporting. According to the Act on Accounting (2013), an accounting entity shall be considered as micro accounting entity if (a) for the accounting period in which they were established, they have decided to operate as a micro accounting entity; or (b) as of the financial statements date and for the immediately preceding accounting period, they have not exceeded two of the following conditions: (i) its total assets did not exceed EUR 350,000; (ii) its net turnover did not exceed EUR 700,000; (iii) its average calculated number of employees did not exceed 10 during the accounting period. Accounting entity meeting specified criteria could become a micro accounting entity with its benefits of simplified accounting procedures and financial reporting. One of the advantages for a micro accounting entity is exception of usage of fair value measurement method. The other advantage, which is discussed in this paper, is a set of simplified forms for annual financial statements. The criteria for small businesses were adopted according the EU regulation. Comparing the 10 employees limit with data provided by the Statistical Office of the SR (2016),

STATdat database, there were 184 258 business legal entities out of which 145 328 had less than 10 employees. The other two criteria could not be tested via STATdat database, but it is estimated than some 80 % of small business will meet the turnover ceiling and total assets ceiling.

### 1.1. Introduction of financial statements of a micro accounting entity

Financial reporting is, essentially, a process based on providing information acquired by financial accounting during the accounting period by presenting annual financial statements. The success of this communication depends upon the appropriateness of the accounting principles. Clarity of presentation and disclosure in the financial statements are determined by the degree of understanding by the readers of the financial statements. It is common fact that if volume of information on the same topics increase, the degree of understanding decreases with higher possibilities for error. Financial statements of a micro accounting entity should present fairly in accordance with the Act on Accounting (2013), the financial position, performance and changes in financial position of a micro accounting entity that is represent faithfully the substance of transactions and other events in accordance with the national accounting regulations in the Slovak Republic. To achieve these requirements the new set of simplified forms for annual financial statements of a micro accounting entity was introduced. It consist only of 2 pages instead of 9 pages and vertical structure consist only of 45 entries comparing to 145 entries of standard balance sheet form used before the introduction of micro accounting entities. This was achieved by simple procedure – line entries are presented in more aggregated form. Values provided for each line entry of assets are presented only in two columns (instead of 4) all in accounting value (net value): (1) current accounting period; (2) preceding accounting period. The content of line entries are strictly set according account number based on the framework chart of accounts. List of assets, equity and liabilities presented in the balance sheet for micro accounting entity is provided in the *Table 1*. Lines containing group totals are highlighted in bold.

**Table 1** Balance sheet for micro accounting entities by line entries

| Line number | | Line number | |
|---|---|---|---|
| **1** | **TOTAL ASSETS** | **24** | **TOTAL EQUITY AND LIABILITIES** |
| **2** | **Non-current assets (total)** | **25** | **Equity (total)** |
| **3** | **Non-current intangible assets (total)** | **26** | **Share capital (total)** |
| **4** | **Property, plant and equipment - total** | 27 | Share capital and change in share capital |
| 5 | Land and structures | 28 | Unpaid share capital |
| 6 | Individual movable assets and sets of movable assets | 29 | Capital funds |
| 7 | Other property, plant and equipment | 30 | Funds created from profit |
| 8 | Value adjustment to acquired assets | 31 | Differences from revaluation |
| **9** | **Non-current financial assets - total** | 32 | Net profit/loss of previous years |
| 10 | Shares and ownership interests | 33 | Net profit/loss for the accounting period after tax |
| 11 | Other non-current financial assets | **34** | **Liabilities (total)** |
| 12 | Bank accounts with notice period exceeding 1 y. | 35 | Non-current liabilities except provisions & loans |
| 13 | Other non-current financial assets with residual notice period not exceeding one year | 36 | Long-term provisions |
| **14** | **Current assets (total)** | 37 | Long-term bank loans |
| 15 | Inventory | **38** | **Current liabilities except provisions, loans and financial assistance - total** |
| 16 | Non-current receivables | 39 | Current trade liabilities |
| **17** | **Current receivables - total** | 40 | Liabilities to employees and to social security |
| 18 | Trade receivables | 41 | Tax liabilities and subsidies |
| 19 | Social security, tax assets and subsidies | 42 | Other current liabilities |
| 20 | Other receivables | 43 | Short-term provisions |
| **21** | **Financial assets (total)** | 44 | Current bank loans |
| 22 | Cash and bank accounts | 45 | Short-term financial assistance |
| 23 | Other financial assets | | |

**Source:** author, based on MF SR (2013)

The purpose of the statement of profit or loss is to provide detailed information on the balance sheet entry of *"Net profit/loss for the accounting period after tax"*. It displays the revenues recognized for an accounting period, and the cost and expenses charged against these revenues, including depreciation and amortization of various assets and taxes. The statement of profit or loss was reduced only to 38 entries from original number of 61 entries. The list of compulsory required line entries of statement of profit or loss for micro accounting entities is provided in *Table 2*. Highlighted in bold are line entries containing group

totals (9 entries). The statement of profit or loss for micro accounting entity is designed to provide basic economic indicators required for financial analyzes.

**Table 2** Statement of profit or loss for micro accounting entities by line entries

| Line number | | Line number | |
|---|---|---|---|
| **1** | **Operating income - total** | **20** | **Income from financial activities - total** |
| 2 | Revenue from the sale of merchandise | 21 | Revenue from the sale of securities and shares |
| 3 | Revenue from the sale of own products and services | 22 | Income from non-current financial assets |
| 4 | Changes in internal inventory | 23 | Income from current financial assets |
| 5 | Own work capitalized | 24 | Interest income |
| 6 | Revenues from the sale of non-current intangible assets, property, plant and equipment, and raw materials | 25 | Exchange rate gains |
| 7 | Other operating income | 26 | Other income from financial activities |
| **8** | **Operating expenses - total** | **27** | **Expenses related to financial activities - total** |
| 9 | Cost of merchandise sold | 28 | Securities and shares sold |
| 10 | Consumed raw materials, energy consumption and consumption of other non-inventory supplies | 29 | Expenses related to current financial assets |
| 11 | Services | 30 | Value adjustments to financial assets |
| 12 | Personnel expenses | 31 | Interest expanse |
| 13 | Taxes and fees | 32 | Exchange rate losses |
| 14 | Amortization and value adjustments to non-current intangible assets and to property, plant and equipment | 33 | Other expenses related to financial activities |
| 15 | Carrying value of non-current assets sold and raw materials sold | **34** | **Profit/loss from financial activities** |
| 16 | Value adjustments to receivables | **35** | **Profit/loss for the accounting period before tax** |
| 17 | Other operating expanses | 36 | Income tax |
| **18** | **Profit/loss from operations** | 37 | Transfer of net profit/net loss shares to partners |
| **19** | **Added value** | **38** | **Profit/loss for the accounting period after tax** |

**Source:** author, based on MF SR (2013)

## 1.2. Adoption of Financial Statements of a Micro Accounting Entity

Financial statements of a micro accounting entity were introduced in 2013 and adoption was set for an accounting period commencing on or after 1 January 2014. Mentioned in previous paragraphs, the main purpose was to prepare simplified set of forms for smaller businesses which comply with national accounting legislation in the Slovak Republic. Keeping in mind the basic definition of financial statements and different information needs of various users a new set of forms for financial statements was designed. Comparison of compulsory content forms design for the general financial statements with financial statements for a micro accounting entity is provided in *Table 3*. After a brief analysis a question arises if information provided by the financial statements of a micro accounting entity provides sufficient information for its users. Appling the underlying assumption that financial statements of a micro accounting entity are with no question relevant for all government agencies because they are the creators of the accounting regulation the goal is to examine the possibility of using accounting data by some other users. The best way to test this hypothesis would be examination of data from financial institutions, which provide credit and loans to businesses. Any significant decline of success rate of granting credit or loans, ceteris paribus, would indicate that the level of relevancy declined with introduction of new format of financial statements, but such data are not publicly available. According to Business Alliance of Slovakia no such effect was reported by its members. According to Kubaščíková, Z. and Pakšiová, R. (2015), Subramanyam & Wild (2014) the application of most common financial ratios of liquidity, profitability and leverage used in financial analyzes or predictions is possible on data provided by a financial statements of a micro accounting entity with no significant difference to data provided by general financial statements used before.

**Table 3** Comparison of financial statements length by line entries

| | **Balance sheet** | | **Statement of profit or loss** | |
|---|---|---|---|---|
| | **General form** | **Micro Accounting Entity** | **General form** | **Micro Accounting Entity** |
| **accounts reported** | 150 | 150 | 98 | 98 |
| **line entries** | 145 | 45 | 61 | 38 |
| **group total lines** | 24 | 9 | 14 | 9 |
| **account/ line ratio** | 1,24 | 4,16 | 2,1 | 3,38 |

**Source:** author

Since it is only very short time period after introduction only limited data are available. Previously mentioned there were 184,258 business legal entities out of which 145,328 had fewer than 10 employees. According to the Register of Financial Statements by Ministry of Finance of the Slovak Republic, which centralizes all collected data from submitted financial statements and provide public access to those data, as of March 2016 a total of 180,230 financial statements of accounting period 2014 were submitted out of which 80,729 were financial statements of micro accounting entities (see Figure 1).

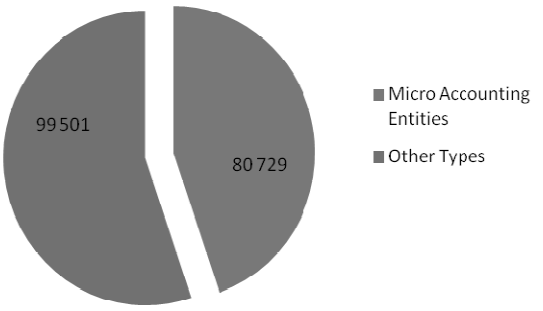


**Figure 1** Number of submitted financial statements for accounting period 2014
**Source:** Adapted from Register of Financial Statements, Copyright 2016 by MF SR. Reprinted with permission.

## Conclusions

Based on the presented data the introduction of financial statements for micro accounting entity was a success. The objective to reduce administrative burden of accounting regulations for small businesses was accepted by businesses with no negative effect on the relevance of data provided by the financial statements considering the fact that financial statements are designed to provide information for wide range of users and financial statements designed for micro accounting entities are the briefest one. A rate 44.82 % out of all submitted financial statements of the first accounting period (2014) after adoption is a huge success. Further ex post analysis of financial statements would be necessary in the future, but only limited amount of data was available at this time, but there are no signs of significant reduction of the relevance. Key information for financial ratios of liquidity, profitability and leverage are available on data provided by the financial statements for micro accounting entity. Common practice for information need of users, such as creditors, which seek different information not provided by the financial statements, is to ask for a more specific and current data regarding on accounting entities' most important business partners including turnover data, detailed information on bank loans, financial assistance and financial leases to perform further analyzes.

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# Medium-Sized Enterprises in Serbia: Basic Characteristics and Employment

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**Abstract**
The purpose of this paper is to present the basic characteristics of the medium-sized enterprises in Serbia with emphasis on the employment in this sector. Numerous studies point out that the role of SMEs is extremely important in the national economy. It is obvious that there are numerous analyses and discussions about the segment of SMEs. However, little attention is given to medium-sized enterprises only. In Serbia, detailed analysis of their basis characteristics is missing. Having in mind that medium–sized enterprises have a great potential to create new jobs as well as contribute to economic revival, it is understandable why we have decided to analyse this segment. Using the statistical data from Serbia Business Registry Agency we have managed to classify medium-sized enterprises according to registered activity and statistical region. The results show unsatisfactory regional and sectoral distribution that does not indicate good prospects for the development of medium-sized enterprises. This paper could be considered, to a certain extent, as a tool policy makers can use in the process of creating environment that would stimulate development and better prospects of medium-sized enterprises and their employees.

**Keywords**
Medium-sized enterprises, employment, regional disparity, activity analysis.

## Introduction

In the recent decades, scientific journals and papers have devoted a lot of attention to entrepreneurship, as the phenomenon of the new business venture which creates new value for the society and the economy. It is often cited that entrepreneurship, viewed as an activity aimed at initiating, organizing and updating business operations with the primary aim of creating a new market and profit, is one of the most important drivers of economic growth. Therefore, there are numerous studies that confirm a direct positive relationship between development and encouraging of entrepreneurship and economic growth and growth of employment (Schumpeter, 2008; King & Levine, 1993; Wennekers & Thurik, 1999; Hasan & Tucci, 2010; and many more). However, entrepreneurship is also important from the perspective of the individuals who start a business because this venture is a way to provide for themselves and for their family. If this venture is developed into successful business, owners can create new jobs and employ other people. Some authors have argued that SME growth is an important way of reducing unemployment in the country (Birch, 1979; Storey, 1994).

Entrepreneurship is also important from the point of prosperity in terms of creating conditions for a better life of all people. Almost all important inventions that gave us more comfortable, better quality life were created as a result of business (entrepreneurial) idea, ranging from radio and television, personal computers and other information technology to biotechnology and new innovative medical discoveries. Thus, the development and promotion of entrepreneurship is not only the basis for improving the quality of living standards

and economic growth, but is essential for the prosperity of society as a whole (Ljumović, Lazić, & Vesić, 2015).

Modern literature often associates entrepreneurial activity, innovation and economic growth, giving examples of prominent companies such as Facebook, Skype, Microsoft, Apple, Intel and similar. Although these companies are extremely interesting and have drawn the attention of researchers all over the world, they are rather exceptional, while the vast majority of small and medium-sized enterprises are not particularly innovative or overly successful. It should be considered that precisely these non-innovative companies account for the largest number of small and medium-sized enterprises and that they are employing the greatest number of people.

The focus of economic policy makers of the European Union is on the small and medium enterprises and their empowerment, especially in times of economic crisis. However, this trend is not present in Serbia. The number of small and medium enterprises is reducing, particularly as the result of the economic crisis and declining availability of the financial resources. It is assumed that a significant number of enterprises will not survive the economic crisis and that the number of micro, small and medium sized enterprises will further reduce in the next years (Ljumović et al., 2015).

## Theoretical concepts of employment

Employment is a multi-layer phenomenon. From economic perspective it is a way to earn a living. Sociologists look at it as a tool that provides socializing with other people, developing teamwork and cooperation skills. Psychologically, employment is important because it can increase self-confidence, moral integrity and it can enable financial independence. On a personal level, it usually increases ability to enhance and develop skills, competences and knowledge. Employed people are an asset to society, since they generate income to the state by paying taxes and other contributions. Legally, employment presents link between employers and employees, defined by contract that regulates rights and responsibilities between parties.

Employment is directly related with economic, social and political indicators and the increase in the number of employees affects the reduction of the state's social costs allocated to the dependent part of the population (Radić, 2005). A large number of the unemployed affects migration, which leads to the loss of the most productive part of the population. In the last few years, in countries with low rates of employment, young people are leaving the country seeking for better living conditions abroad or migrating from villages to larger cities, leading to regional differences in employment rates in the country.

Employment rate and unemployment rate are the main indicators of the labour market, while activity and inactivity rate are used to measure its effectiveness and conditions. Data for these indicators is obtained from Labour Force Survey and the records from the National Employment Service. The statistics on labour market are important since they could be used for ranking initiatives on employment policy and for monitoring the implementation and effectiveness of labour market programs (Goldfarb & Adams, 1993, pp. 2-4). The main indicator used in this paper is the employment rate, defined as the ratio between the total number of employees and the total number of working-age people. Having in mind the specificities of the Serbian market, such as transition and large-scale privatizations, it is usual to expect the problem of low employment rate since the early nineties (Radić, 2005). There is no doubt that the privatization of a large number of companies and changes in ownership structure influenced the dismissal of workers and hindered market relations in the field of the labour.

Since the beginning of the crisis, the largest annual decline of the employment rate in Serbia was recorded in 2009 (-7.2 %). The decline continued in the next three years, but at much slower pace. The unemployment rate in Serbia has changed in the period 2009-2013 from 16%, 19.2%, 23%, 23.9% and 22.1%, retroactively (Statistical Office of the Republic of Serbia, 2014).

Recent trends show that employment in the SME sector is constantly decreasing. In contrast to SMEs, large enterprises showed an increase employment in 2011 and 2012, but not enough to reduce the overall growth of unemployment in the economy of the Republic of Serbia. According to the latest data of the Ministry of Economy and National Agency for Regional Development (Ministarstvo privrede – Nacionalna agencija za regionalni razvoj, 2014), number of employees in the SME sector decreased by 13,476 in 2013 while the number of employees in medium enterprises in 2013 has not changed from the same pe-

riod of the 2012 (-0.5%). The greatest rate of decrease in the number of workers was in small companies (-3.7%).

According to the statistical data for the countries of the region, Croatia recorded positive changes on the Labour Market in 2013 (Teodorović & Lovrinčević, 1998). For example, employment growth is evident in the sector of small (1.9%) and medium enterprises (0.5%), while a decline in employment was recorded in large enterprises (2.7%) (CEPOR, 2014).

In Serbian economy, there is significant number of barriers to SME growth. Key issues are related with a high unemployment rate in the country, a low level of FDI and a high level of the government debt (Lazić, Pavlović, & Cvijanović, 2013). In 2013, number of micro enterprises has increased by 2,586 or 3.3%, while in all other business entities decreased such as the number of entrepreneurs by 3,980 or - 1.8%, medium-sized enterprises by 10 or -0 5%, small enterprises by 346 or -3.6% and large companies by 12 or 2.4%. Bartlett and Bukvić (2005) concluded that large enterprises have more advantages than small ones. On the other hand, an increase of the small companies has insignificant role in regeneration and transition growth (Scase, 1997).

## Methodology

The primary database (containing data on registration number, status, name of the company, date of establishment, legal form, activity code, activity, tax number, size, number of employees) on the medium-sized enterprises was obtained from Serbia Business Registry Agency. The data shows that there were 1004 companies classified as medium-sized at the end of 2015. These companies were employing 165,785 workers. The basic data set from Serbia Business Registry Agency contained information that allowed us to further define their activity and statistical region where they were registered. Classification and analysis of enterprises was based on activities and on the basis of statistical regions. The importance of this analysis is reflected in the fact that, although there are a few similar analysis that include segment of SMEs as a whole, only raw data on medium-sized enterprises exists. In order to conduct analysis, authors had to add data about enterprise activity and NUTS 2 and NUTS 3 statistical region to every enterprise in the analysis.

The criteria for classification of enterprises are determined in accordance with Article 6 of the Law on Accounting. Enterprises are classified middle if they satisfy two out of three following criteria:

1. The average number of employees is higher than 50 but lower then 250;
2. Operating income is between 8.8 and 34 million Euros in dinar equivalent;
3. Average value of business assets (calculated as the arithmetic mean value at the beginning and at the end of the business year) is in the range between 4.4 and 17.5 million Euros in dinar equivalent.

We were not able to make comparison with previous period due to the inconsistency of the methodology, regulatory framework and irregularity of annual publications. The classification of enterprises changed in 2013 when the new legislation was introduced and the number of medium-sized enterprises fell by over 50%. The latest issue of the annual publication on small and medium enterprises (with the number of medium-sized enterprises, their classification according to their activities and regional distribution) is available for 2013.

## Basic characteristics of medium sized enterprises in the republic of Serbia

In order to get the basic characteristics of medium-sized enterprises related to their activity and regional distribution we classified them according to their registered activity and in relation to the district and region where they operate. This classification could give us an insight into the most attractive activities and regions with high concentration of medium-sized enterprises.

The classification of activities was done on the basis of the Law and the Regulation on Classification of Activities (Official Gazette of RS, 2009, 2010) and in relation to defined sectors in this regulation. The most important sector for medium-sized enterprises, according to the official registered activity, is manufacturing (sector C) with 368 registered companies. It is followed by wholesale and retail trade; repair of motor vehicles and motorcycles (sector G) which includes 272 companies. Together, these two sectors account for over 60% of registered medium-sized enterprises. Sector of agriculture, forestry and fishing (74 companies), construction sector (89), the transport and storage (51) and the sector of professional, scientific and technical activities (42) are also significant to a certain degree. All other sectors which are not listed here include

only 108 companies in total. This statistic is shown in Figure 1.

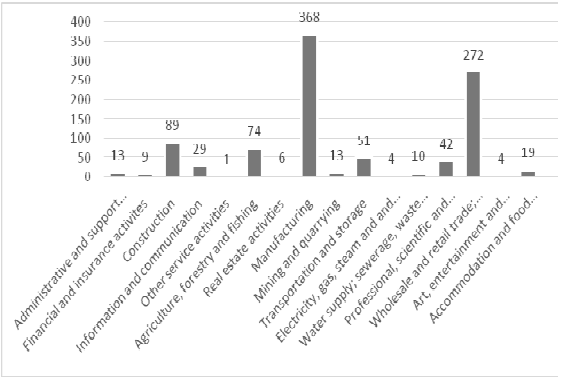


**Figure 1** Distribution of medium-sized enterprises by Classification of Activities
**Source**: Authors calculation according to the data from Serbia Business Registry Agency, 2016

Regional analysis shows significant differences in the level of development among regions of the Republic of Serbia, as well as the uneven geographical distribution of registered medium-sized enterprises. Belgrade region (44.1%) and region of Vojvodina (28.8%) (that constitute Northern Serbia ) account for 72.9% of total medium-sized enterprises with 732 registered companies. Compared to the statistics of the total number of SMEs that operate in Serbia, regional disproportion is even more noticeable in medium-sized enterprises. As we mentioned, Northern Serbia accounts for 72.9% of all medium-sized enterprises, while this number is much lower in the general statistics on total SMEs and is 58.1%. The biggest distinction is made in the Belgrade region by over 10%. The number of medium-sized enterprises registered in Southern Serbia region (27.1%) is significantly smaller than the percentage of SMEs registered in this area 41.8% (Table 1). A methodological note has to be added. The report on small and medium enterprises that is used as a source for comparison of medium-sized enterprises and total SMEs is from 2013 and is the latest available. This report does not reflect the changes in classification made in 2013. However, the authors used this report because they assume that the total number of SMEs did not change to a great extent.

A more detailed analysis, according to NUTS 3 statistics, showed that there is no district beside Belgrade and South Bačka (with the city of Novi Sad) with the participation of over 10% in the total number of medium-sized enterprises (Table 1). The Belgrade District dominates over the statistics of medium-sized enterprises with 443 registered companies in contrast to the Pirot district, where only one medium-sized enterprise is registered. Pirot and Toplica districts with only 5 registered medium-sized enterprises perfectly illustrate this territorial disparity.

**Table 1** The regional distribution of medium-sized enterprises by districts

| | | | Number of medium-sized enterprises | % medium -sized enterprises in total | % of total SMEs |
|---|---|---|---|---|---|
| SERBIA - NORTH | Belgrade | Belgrade | 443 | 44.1 | 31,7 |
| | Vojvodina | West Bačka | 25 | 2.5 | n/a |
| | | South Banat | 31 | 3.1 | n/a |
| | | South Bačka | 106 | 10.6 | n/a |
| | | North Banat | 20 | 2.0 | n/a |
| | | North Bačka | 38 | 3.8 | n/a |
| | | Central Banat | 25 | 2.5 | n/a |
| | | Srem | 44 | 4.4 | n/a |
| | | Total | 289 | 28.8 | 26.5 |
| | TOTAL | | 732 | 72.9 | 58.1 |
| SERBIA - SOUTH | Šumadija and West Serbia | Zlatibor | 20 | 2.0 | n/a |
| | | Kolubara | 15 | 1.5 | n/a |
| | | Mačva | 37 | 3.7 | n/a |
| | | Moravica | 35 | 3.5 | n/a |
| | | Pomoravlje | 16 | 1.6 | n/a |
| | | Rasina | 21 | 2.1 | n/a |
| | | Raška | 19 | 1.9 | n/a |
| | | Šumadija | 26 | 2.6 | n/a |
| | | TOTAL | 189 | 18.8 | 25,6 |
| | South and East Serbia | Bor | 8 | 0.8 | n/a |
| | | Braničevo | 12 | 1.2 | n/a |
| | | Zaječar | 5 | 0.5 | n/a |
| | | Jablanica | 11 | 1.1 | n/a |
| | | Nišava | 20 | 2.0 | n/a |
| | | Pirot | 1 | 0.1 | n/a |
| | | Podunavlje | 10 | 1.0 | n/a |
| | | Pčinja | 12 | 1.2 | n/a |
| | | Toplica | 4 | 0.4 | n/a |
| | | TOTAL | 83 | 8.3 | 16,2 |
| | TOTAL | | 272 | 27.1 | 41.9 |

**Source**: Authors' calculation according to the data from Serbia Business Registry Agency (Ministarstvo privrede – Nacionalna agencija za regionalni razvoj, 2014)

Analysis on the level of municipality provides us with the information that the largest number of companies is registered in developed areas – large cities where Belgrade is the leader with 425 registered medium-sized companies. Although 1004 medium-sized enterprises that operate in Serbia at the end of 2015, were registered in 135 municipalities, only 15 municipalities have more than 10 registered entities. The remaining 121 municipalities have 321 registered companies, as shown in Figure 2.

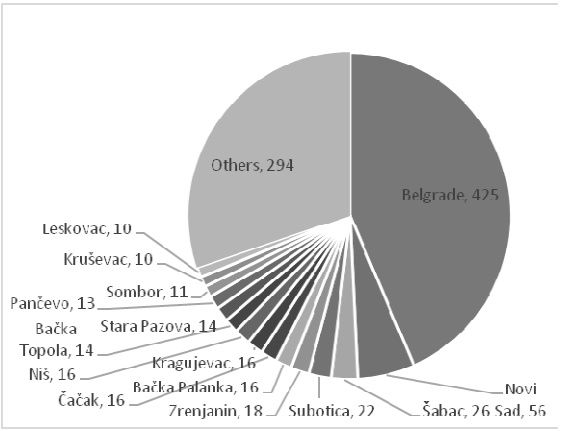


**Figure 2** Distribution of medium-sized enterprises by municipalities
**Source**: Authors calculation according to the data from Serbia Business Registry Agency, 2016

## Employment analysis in medium-sized enterprises: regional and sectoral disparities

At the end of 2015, 1,004 medium-sized enterprises employed a total of 165,785 workers. Two sectors with the greatest number of enterprises (manufacturing with 66,284 - 40% and wholesale and retail trade; repair of motor vehicles and motorcycles, 29,054 - 17.5%) employ the most people. Even at a first glance, Figure 3 shows that activities have different intensity of employment. The administrative and support services stand out with the most intense activity, with average of over 1200 employees per enterprise. Only three activities (Transportation and storage; Art, entertainment and recreation and Professional, scientific and technical activities) have over 200 employees per company. The Electricity, gas, steam and air conditioning supply activity has the lowest intensity of employment.

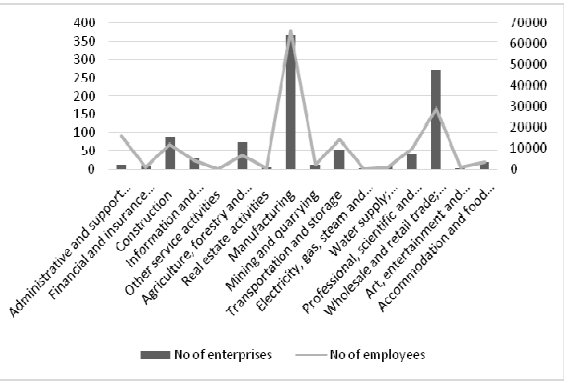


**Figure 3** Number of employees in medium-sized enterprises in relation to activity
**Source**: Authors calculation according to the data from Serbia Business Registry Agency, 2016

Serbian economy is characterized by great disparities in the level of economic development between regions and districts. This tendency is also noticeable in the segment of medium-sized enterprises and in the long term it could be a major development constraint. Statistics on the distribution of the number of employees' is almost the same as distribution of the number of registered enterprises. The highest concentration of employees is in economically developed regions and districts. Northern Serbia employs 70 percent of all workforce in medium-sized enterprises, whereas Belgrade as the biggest and most developed area accounts for over 40 percent. On the other side, only 30% of employees are working in enterprises registered in Southern Serbia. The most drastic statistic is shown in the region of South-East Serbia where only one tenth of total employees works in medium-sized enterprises. Extremely high regional disparity levels of medium-sized enterprises are best illustrated by the number of employees in Pirot 1.3%, Zaječar 4.1%, Toplica 4.3% and in Bor 4.4% (all districts from South and East Serbia).

Employment in medium sized enterprises has the highest influence on the Belgrade region with 12.8 percent, while the lowest impact is achieved in the South East Serbia region with 7.1 percent. However, comparing the participation of employees in medium-sized enterprises to total employed workforce in all statistical areas, certain districts dominate. Medium-sized enterprises have high impact on the district where their employee participation is higher comparing to total workforce in the same district. These districts include Central Banat (19.2%), Belgrade (12.8%), Mačva (12.5) and Moravica (12.3%).

**Table 2** The regional distribution of employees in medium-sized enterprises by districts

| NUTS 1 | NUTS 2 | NUTS 3 | No of employees in medium-sized enterprises | No of total employees | % of medium-sized enterprises employee in total | % medium -sized enterprises in total | % of employees in medium-sized enterprises |
|---|---|---|---|---|---|---|---|
| SERBIA - NORTH | Belgrade | Beograd | 72037 | 559231 | 12.8 | 44.1 | 43.4 |
| | Vojvodina | West Bačka | 2856 | 35246 | 8.1 | 2.5 | 1.7 |
| | | South Banat | 2923 | 55719 | 5.2 | 3.1 | 1.7 |
| | | South Bačka | 17245 | 176174 | 9.7 | 10.6 | 10.4 |
| | | North Banat | 2735 | 31151 | 8.7 | 2.0 | 1.6 |
| | | North Bačka | 4089 | 44676 | 9.1 | 3.8 | 2.4 |
| | | Central Banat | 7560 | 39204 | 19.2 | 2.5 | 4.5 |
| | | Srem | 6745 | 61226 | 11.0 | 4.4 | 4.0 |
| | | Total | 44153 | 443396 | 9.9 | 28.8 | 26.6 |
| | TOTAL | | 116190 | 1002627 | 11.5 | 72.9 | 70.0 |
| SERBIA - SOUTH | Šumadija and West Serbia | Zlatibor | 3074 | 60284 | 5.1 | 2.0 | 1.8 |
| | | Kolubara | 2160 | 39193 | 5.5 | 1.5 | 1.3 |
| | | Mačva | 6383 | 50687 | 12.5 | 3.7 | 3.8 |
| | | Moravica | 6006 | 48625 | 12.3 | 3.5 | 3.6 |
| | | Pomoravlje | 2226 | 39733 | 5.6 | 1.6 | 1.3 |
| | | Rasina | 4910 | 42714 | 11.5 | 2.1 | 2.9 |
| | | Raška | 3031 | 51785 | 5.8 | 1.9 | 1.8 |
| | | Šumadija | 3609 | 63089 | 5.7 | 2.6 | 2.1 |
| | | TOTAL | 31399 | 396110 | 7.9 | 18.8 | 18.9 |
| | South and East Serbia | Bor | 1196 | 27052 | 4.4 | 0.8 | 0.7 |
| | | Braničevo | 3059 | 32669 | 9.3 | 1.2 | 1.8 |
| | | Zaječar | 886 | 21221 | 4.1 | 0.5 | 0.5 |
| | | Jablanica | 2349 | 36670 | 6.4 | 1.1 | 1.4 |
| | | Nišava | 5518 | 77382 | 7.1 | 2.0 | 3.3 |
| | | Pirot | 248 | 18306 | 1.3 | 0.1 | 0.1 |
| | | Podunavlje | 1892 | 33975 | 5.5 | 1.0 | 1.1 |
| | | Pčinja | 2351 | 35665 | 6.5 | 1.2 | 1.4 |
| | | Toplica | 697 | 16012 | 4.3 | 0.4 | 0.4 |
| | | TOTAL | 18196 | 298952 | 6.0 | 8.3 | 10.9 |
| | TOTAL | | 695062 | 49595 | 7.1 | 27.1 | 29.9 |
| **TOTAL SERBIA** | | | 165785 | 1697689 | 9.7 | 100 | 100 |

**Source**: Authors

## Conclusion

The current situation in the medium-sized (and small) enterprises is affected by several factors. One of the most significant is the period of transition, which led to the disappearance of social capital, implementation of the structural changes and the number of reform measures. This was the first prerequisite for the growth and development of entrepreneurship and hence medium-sized enterprises. Restructuring or shutting down the enterprises with socially owned capital has created a vacuum space for the emergence of private companies that entered the market and employed workforce that was left jobless. The emergence of new companies reduced the growth of unemployment that was created as a result of shutting downs and restructuring of enterprises with socially owned capital to a certain extent. These new private companies that were usually in a form of small or medium-sized enterprises were supposed to be the drivers of economic growth and development of the Republic of Serbia. Unfortunately, in the post-transition period an opportunity to create a sustainable and favourable business environment that would stimulate and foster the growth of small and medium-sized enterprises was missed and therefore the chance for the economic growth. The rapid growth and increase in the competitiveness of small and medium-sized enterprises in the years after the transition is justified by their low starting base. Having this in mind, it is not surprising that the global financial crisis had the highest impact on the segment of SMEs.

Basic problems of medium-sized enterprises in Serbia that are identified in this analysis are unsatisfactory regional and sectoral distribution. Although the most important sector is manufacturing industry (with the largest number of enterprises and number of employees), companies operating within this sector often do not engage in their registered activity, but essentially do trading. If an estimation of the number of enterprises with manufacturing activities that are essentially engaged in trade is done and added to the number of companies from the sector of trade, the data shows devastating fact that companies from the segment of the economy which should be the engine of economic development (medium-sized enterprises) are essentially dealing with primary economic activity - trade. This does not indicate good prospects for the development of medium-sized enterprises. Regional statistics is also unsatisfactory. The analysis shows a high concentration in developed parts of the country, with over 40 per cent of registered medium-sized enterprises (and the number of employees) in Belgrade. This data may indicate only to intensification of migra-

tion to urban areas, of those who are looking for work. Unfortunately, the analysis does not show good prospective for medium-sized enterprises and their employees. Policymakers have a very large and difficult task in creating a business environment that would stimulate the segment of medium-sized enterprises and turn them into drivers of the economic development of Serbia. SM

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# Analysis of the Dynamics of Inflation in Serbia

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**Abstract**
Inflation is one of the phenomena that attract the attention of many researchers. Inflation is not a phenomenon that has appeared in recent years, from the time of creation of money and the development of the first economies. Today, although there are a large number of papers on this topic, we still do not know enough about all the factors that affect the formation and evolution of inflation and inflation dynamics. Regression analysis is a powerful statistical tool that can help you gain a large amount of existing data on inflation analysis and thus to partial answers to the questions that are all factors that affect inflation and in what way. In this paper, the use of multiple regression analysis was performed to analyze the influence of factors that contribute to the emergence of inflation, such as monetary aggregates, discount rate and the level of gross domestic product, the discount rate of the Central Bank of Serbia. It is also an analysis of the coefficients of price elasticity of money in the long run, the coefficient of price elasticity of production in the long term and elasticity of demand for money in Serbia.

**Keywords**
CPI, Serbia, monetary aggregates, multiple regression analysis, long-run price elasticity of money, long-run price elasticity of output, income elasticity of money demand.

## Introduction

Since the creation of money people have constantly been investigating its origin, character and essence. These studies continue today, and will continue as long as there is money. From the moment when money is inserted into the process of exchange of goods, it constantly occupied professional public. It is especially important how and to what extent money affects key macroeconomic variables such as inflation, exchange rates, interest rates, growth rates of gross domestic product, unemployment, etc.

In terms of the impact of money on these variables, there are conflicting opinions in theory. Some highlight the role of money and emphasize that it is very important. Others argue that money has a neutral role and only affects nominal variables, while in the long term it has no influence on real variables. Third point out that one could live and work without money, because money has intermediary role. However, the fact is that when the central bank loses compass in the conduct of monetary policy, it results in high inflation, which often ends in hyperinflation episode, which destroys the financial and economic system, and seriously undermines the functioning of the social system. It is therefore very important to correctly measure the timely acceleration of money supply by the central bank, because the fact is that the existence of a stable economy is possible only if there is a required amount of money in circulation.

The aim of this paper is to use regression analysis and multiple regression analysis to determine the impact of parameters such as the amount gross domestic product, the M3 monetary aggregate, discount rate of the Central Bank of

Serbia on the level of inflation in Serbia in the period from 2007 to 2015 on a quarterly level.

## 1. The concept of inflation

Inflation can be defined as the continuous growth of the general level of prices or continuous absolute decline in the value of money. Many authors are trying to define inflation in different ways so that they can explain its consequences in detail. The best definition of inflation was given by Professor Hamid Filipović (1960, p. 69) as follows: "Inflation is an economic and financial phenomenon, caused by disturbance of the balance in the factors of production, and as a consequence it results in increase of money circulation by issuing banknotes and credit money without proper cover in metal or production, which results in loss of purchasing power of money and the price rise, which is reflected in the redistribution of national income at the expense of poorer, and in favour of wealthier social classes".

Inflation is not an economic phenomenon of recent date. The first signs of inflation date back to ancient times when precious metals played the role of money. For example, when gold was used as money, rulers collected coins, melted and mixed them with other metals, copper or lead, and put it back on the market, with the nominal value of these coins remaining the same, but with changed real value. In this way, the authorities issued a greater amount of money than they possessed gold for making it, and thus made a profit by reducing the cost of minting new coins. This lead to an increase in money supply in circulation with an unchanged demand for it, which lead to a reduction in the value of money. This still means that the purchase for the same quantity of certain goods citizens had to provide greater amount of money, which lead to an increase in the price of goods and services due to the fall in the value of money. There are numerous examples of rulers who have used this technique.

The consequences of inflation are numerous, and can be positive and negative. Some authors identify inflation with alcoholism and drunkenness (Đurović-Todorović, 2014, p. 353). Initially, inflation is low and has a positive effect, because it leads to the expansion in production and employment, increases in the prices of goods and an increase in wages. Later economic agents recognize that the changes are only apparent, that real wages have not increased, but only nominally, and economic agents try to predict future inflation trends, and to engage in increasing their earnings. If policymakers do not react on time with appropriate instruments and measures, and do not maintain the confidence of other undertakings, it can lead to hyperinflation, the rejection of the national currency due to loss of confidence in it and the collapse of the economy.

What now interested many researchers is to identify signs of inflation to be used by policy makers as a signal that there is a certain change in the dynamics of inflation. So today, a number of central banks' main objective includes maintaining price levels and implementing the strategy of inflation targeting.

## 2. Theories and measurement of inflation

Inflation has many causes and is rarely caused by only one factor. Usually the initial impulse is given by one factor, but it soon adds new impulses caused by other factors. Depending on whether the initial causes of inflation are on the demand side or on the cost side, we can talk about inflation, demand inflation and costs inflation. In addition to these theories of inflation in the literature there is theory of structural inflation, which sees causes of inflation in structural disturbances in the economy.

The theory of inflation demand occurs in two main variants: Classical and Keynesian. According to the classical approach, inflation is a monetary phenomenon. Since it is expressed in monetary prices of goods, there must be a definite relationship between the money supply and price level. Basically the classical explanation of inflation is a quantitative theory of money. The inflation rate will depend on whether the economy is in a state of full employment and whether there are inflationary expectations.

Chicago School monetarists do not consider the speed of circulation of money a constant, as it is considered by the quantitative theory of money, but more stable and predictable function of a number of variables. In the long run, velocity of money is very stable, with a slight downward trend. Therefore, inflation in the long term is impossible without an increase in the money supply. In the short term, monetary changes will mainly operate on output growth in the long run will act solely on price.

Keynesian theory rejected the assumption of the functional interdependence of money and aggregate spending. Prices may rise when the money supply is not growing, but can also remain unchanged when the money supply grows faster

than production. In a state of full employment, increasing effective demand can affect the increase in production and employment, but only on the growth of the general price level. The growth of nominal wages in a state of full employment, with unchanged propensity to save, encourages imbalance between aggregate demand and aggregate supply and leads to price increases. The price increase will continue until the state reduces the level of disposable income. Keynes sees an important role for fiscal policy.

Keynes essentially denied Say's Law of the market, arguing that the balance of savings and investments is not as easy as classicists thought. His criticism was directed towards the flexible prices and wages, considering that various monopolies and trade unions impede the movement of prices and wages down, which would lead to the establishment of a new full employment. Keynes' measures proved to be successful to pull the economy out of a deep depression (Živkov, 2008, p. 21).

According to the theory of cost inflation, inflation is caused by growth of costs in the production of goods and services, with unchanged demand. The increase in any category of costs that are not compensated by a corresponding reduction of some other categories of costs, pushed up prices, and hence the term cost-push inflation. Rising costs put pressure on prices, thus moving upward the spiral of costs and prices.

According to the theory of structural inflation insufficient sectoral coordination of supply and demand is the cause of inflation. The backwardness of entire branches of industry increased prices of their products and services, even if the economy does not have an excess of aggregate demand. If it is an important economic sector such as construction and agriculture, the increase in prices in these sectors is transmitted to all branches and causing inflation. If there is excess aggregate demand, structural inflation may become very strong.

Inflation is usually determined by the rate of inflation. The inflation rate is calculated as a percentage share of the price difference from the current period with the price from the previous period in price from the previous period.

$$\%\, inflation = \frac{price\ level(t) - price\ level\ (t-1)}{price\ level\ (t-1)} \cdot 100\%$$

Inflation can be measured by different price indices: The producer price index, consumer price index and GDP deflator (Kitanović & Golubović, 2006, p. 485).

In practice, the most widely used measure is the Consumer Price Index (CPI). Consumer Price Index is a measure of the price level selected group of goods that the average consumer uses. It is calculated as:

$$CPI = \frac{current\ price\ level}{price\ level\ in\ base\ period} \cdot 100$$

When calculating the overall consumer price index to each of the price of goods that have been acquired by the list allocates the appropriate weight and is calculated as a weighted average of prices of goods.

$$CPI = \sum_{i=1}^{n} CPI_i \cdot w_i$$

Producer Price Index (PPI) is the average change in prices of the products produced by local manufacturers.

In addition to these indicators more indicators are used such as cost of living index, consumer price index, GDP deflator and core inflation. Cost of living index measures the change in the average level of the cost of living. The retail price index measures the change in the average level of retail prices. GDP deflator is a measure of the price level of new final products and services produced in the country and core inflation. It is calculated as the ratio between the nominal GDP and real GDP and the resultant value is multiplied by a hundred. Core inflation is a measure of inflation that has been in use the past few decades. It is calculated on the basis of changes in retail non-seasonal goods and services which are formed according to market conditions. It does not include the price rove in some of the regimes of regulation (energy, utilities and other services, medicines, etc.).

European Central Bank is using in the harmonized consumer price index - HICP to determine the inflation and price stability. This index is the consumer price index, which is compiled according to the methodology that is harmonized in the countries of the European Union. In the euro area HICP is a weighted average price index of the Member States that have adopted the euro. The primary objective of the ECB is to maintain price stability, defined as the maintenance of HICP growth from one year to not more than 2% over the medium term.

## 3. Measuring inflation dynamics through regression analysis

In today's inflation, great attention is dedicated to the research of the dynamics of inflation and its relation to other macroeconomic indicators, such as unemployment, income and money supply. Some of the works dealing with this issue are Hess and Schweitzer (2009) and Bjornstad and Nymoen (2008). Rudd and Whelan (2005) study inflation in their work in terms of rational expectations of economic agents and the inflation trends. Flanita and Sipos (2007) dealt with the analysis of inflation and the impact of macroeconomic indicators such as unemployment rate, foreign exchange rate, interest rate, PPI, monetary aggregates and loans issued on the case of Romania and determine the existence of a significant relationship and impact of these indicators on inflation.

One of the things that also attracted the attention of researchers has studied the dynamics of inflation, or in terms of physics. Lewis (2010) applied Newton's law of cooling to describe the trend of inflation in the case of the United States over the long term and showed that this law, which is used in physics in the field of thermodynamics, can describe the trend of inflation in the long run. Also Tomić (2011) in his master thesis has shown that the same law can be applied to describe the dynamics of the value of monetary aggregates in the long term.

Today, many studies conducted in order to determine the importance of the use of monetary aggregates to maintain the stability of the price level. Ndjokou (2011) has shown that it is important to define the monetary aggregates well in order to maintain a stable price level in the BEAC zone. In his work on the case of Nigeria, Adedoyin (2006) found that there is a relationship between monetary aggregates and inflation. Frederic (2000) studied what the best strategy is to maintain price stability in the case of industrialized countries. In the case of Germany and Switzerland it has been shown that targeting monetary aggregates gives the best results, while the case of other countries, inflation targeting is the best strategy. Bennett and Edward (2010) demonstrated relationship between monetary aggregates and inflation by the quantity theory in their work.

In this paper we analyze the dynamics of inflation in the Republic of Serbia in the period from January 2007 to the end of the third quarter of 2015. Data on dynamics in the price level were obtained from the website of the Statistical Office of the Republic of Serbia in which was used as an indicator of inflation CPI with base value in 2006. Graph made using the program Origin 9.

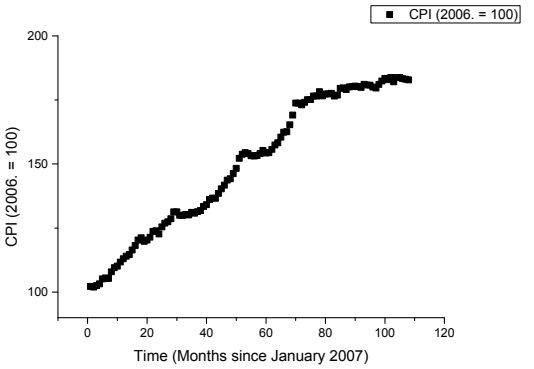


**Figure 1** Graph of CPI dynamics
**Source:** Authors

On the basis of the graphic we can see that in the period from January 2007 until the first 70 months there is a strong trend of price growth in Serbia, while from the 70 month onwards a decline in the growth rate of the price level and come up with a period of stabilization of the price level in Serbia.

To perform the analysis of the dynamics of inflation in Serbia we used the data for CPI, GDP, CBS discount rate and the M3 monetary aggregate on a quarterly basis in the period from the first quarter of 2007 to the third quarter of 2015. At the beginning regression analysis was performed for each of the observed elements of simple linear regression, while after this analysis, we used the model presented by dr Rangarajana (2012) which performs analysis of inflation trends based on multiple regression analysis and to:

$$P_t = \alpha_0 + \alpha_1 Y_t + \alpha_2 M_t + \alpha_3 E_t + \alpha_4 P_{t-1} + \varepsilon_t$$

where:

$Y_t$ - logarithmic value of GDP per time unit *t*
$M_t$ - logarithmic value of the M3 monetary aggregate per unit time *t*
$E_t$ - logarithmic value discount rate NBS unit time *t*
$P_t$ - logarithmic value of the CPI index in a unit of time *t*
$\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4$ - coefficients
$\varepsilon_t$ - error

Based on the obtained values of coefficients we can see the degree of influence of some of the

observed indicators of the movement of the price level in the reporting period *t*. Rangarajan also proposed to use additional indicators that will talk about the elasticity of money and elasticity of output in the long term, as well as the income elasticity of demand for money. These indicators are obtained by applying the following formula:

$$El_n = \frac{\alpha_2}{1-\alpha_4}$$

$$El_o = \frac{\alpha_1}{1-\alpha_4}$$

$$El_t = \left|\frac{\alpha_1}{\alpha_2}\right|$$

Further work will be performed linear regression of each of the parameters that are taken into consideration and presented free linear regression models. Durbin-Watson test will be taken as a test of autocorrelation.

## 4. Results

Based on the model presented in this paper an analysis of data is collected using the multiple linear regression. Data processing is performed in the Gretl program.

**Table 1** Values for multiple linear regression

| | *Coefficient* | *Standard error* | *t-ratio* | *p-value* | |
|---|---|---|---|---|---|
| const | 0,609212 | 0,274505 | 2,2193 | 0,0344 | ** |
| logGDP | −0,136214 | 0,0437054 | −3,1166 | 0,0041 | *** |
| logM3 | 0,0883919 | 0,0425057 | 2,0795 | 0,0465 | ** |
| loges | 0,0245395 | 0,0109992 | 2,2310 | 0,0336 | ** |
| logCPI1 | 0,831558 | 0,063285 | 13,1399 | <0,0001 | *** |

**Source:** Authors

| | | | |
|---|---|---|---|
| Mean dependent var | 2,172962 | S.D. dependent var | 0,076238 |
| Sum squared resid | 0,000751 | S.E. of regression | 0,005090 |
| R-squared | 0,996083 | Adjusted R-squared | 0,995542 |
| F(4, 29) | 1843,474 | P-value(F) | 1,94e-34 |
| Log-likelihood | 133,9955 | Akaike criterion | −257,9910 |
| Schwarz criterion | −250,3592 | Hannan-Quinn | −255,3883 |
| rho | 0,208825 | Durbin-Watson | 1,570188 |

**Source:** Authors

Based on an analysis using the multiple linear regression we can see that the model describes well the impact of the observed indicators on inflation. The obtained data shows that if there is growth of logarithmic value of GDP by 1% it would have a negative impact on the amount of inflation which will decrease for 0.14%. The logarithmic value of the M3 monetary aggregate has a positive impact on the trends in inflation and if there is an increase in the value of 1% there will be an increase in the amount of inflation of 0.09%. The discount rate also has a positive impact on inflation so that in case of growth of logarithmic discount rate by 1% will be an increase in inflation of 0.02%. The model was also observed and influenced the amount of CPI index, or inflation in the previous quarter so that the impact is positive. Parameter values are statistically significant at the 5% level of significance, while the logarithmic value of GDP and CPI in the previous period, the level of significance of 1%. The value of the coefficient of determination was 0.99 which indicates that this model can describe 99% of the variation in values. Also Durbin-Watson test shows no statistical evidence that errors are negatively autocorrelated, while statistically not determined whether or not there is a positive autocorrelated in residuals.

The following graph shows the values obtained on the basis of data from the model and statistical data from the 95% significance.

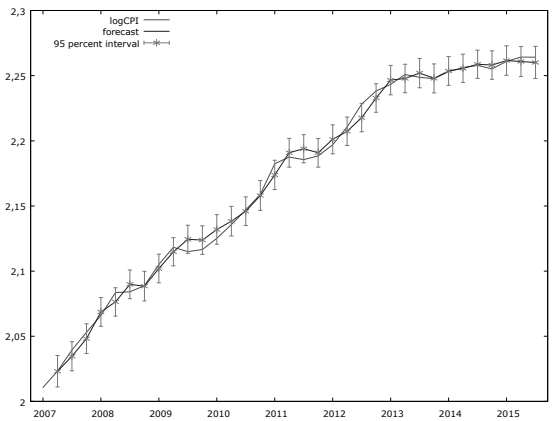


**Figure 2** CPI index values (model / statistical data)
**Source:** Authors

Based on the obtained values of coefficients the following values for the elasticity of money, the elasticity of output and income elasticity of demand for money were obtained:

$$El_n = 0{,}52476$$

$$El_o = -0{,}80867$$

$$El_t = 1{,}5410$$

## Conclusion

One of the problems with which every economy in the world meets is inflation. It is a monetary phenomenon, which leads to the continuous growth of the general level of the absolute price or a continuous decline in the value of money. This phenomenon attracted the attention of economists. Also there are many studies that will address the causes, and consequences of this phenomenon. Among many factors inflation affects the amount of money in circulation whose value is in charge of the Central Bank. It is determined through the conduct of monetary policy by the application of its instruments and measures controlling the money supply, while monetary aggregates are used as indicators and benchmark for the control and strategy of monetary policy. Using the multiple regression analysis, the impact of monetary aggregate M3, GDP and the discount rate at the level of inflation in Serbia in the period 2007 – 2015 was tested in this paper, on a quarterly basis using the model proposed by Rangarajan. The value of the coefficient of determination was 0.99 which indicates that this model can describe 99% of the variation in values. Also, the values obtained for the long-term elasticity of money: 0.52; the long-term elasticity of output -0.81 and long-term income elasticity of demand for money of 1.54. The value of t-statistic for the observed parameters indicates that the values obtained are statistically significant and confirms the influence of these parameters on the level of the CPI index in the reporting period.

In further research, model can be extended to observation and other economic factors and how they affect the dynamics of the level of inflation in Serbia, as well as the observation of individual components of the goods and services and which of them has the most influence on the overall level of CPI index. Also in future work should address and analyze perceptions of inflation of economic agents, population, economy and financial sector and how it affects the level of inflation. SM

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➲ **Book, two authors**

Ljubojević, K., Dimitrijević, M. (2007). *The enterprise knowledge portal and its architecture*. Subotica: Faculty of Economics.

➲ **Book, three to six authors**

Ljubojević, K., Dimitrijević, M., Mirković, D., Tanasijević, V., & Perić, O. (2006). *Importance of software testing*. Subotica: Faculty of Economics.

➲ **Book, more than six authors**

Mirković, D., Tanasijević, V., Perić, O., Jovanov, N., Boškov, T., Strakić, F., et al. (2007). *Supply chain management*. Subotica: Faculty of Economics.

➲ **Book, no author or editor**

*Web user interface* (10th ed.). (2003). Subotica: Faculty of Economics.

➲ **Group, corporate, or government author**

Statistical office of the Republic of Serbia. (1978). *Statistical abstract of the Republic of Serbia*. Belgrade: Ministry of community and social services.

➲ **Edited book**

Dimitrijević, M., & Tanasijević, V. (Eds.). (2004). *Data warehouse architecture*. Subotica: Faculty of Economics.

➲ **Chapter in an edited book**

Boškov, T., & Strakić. F. (2008). Bridging the gap: Complex adaptive knowledge management. In T. Boškov & V. Tanasijević (Eds.), *The enterprise knowledge portal and its architecture* (pp. 55-89). Subotica: Faculty of Economics.

➲ **Encyclopedia entry**

Mirković, D. (2006). History and the world of mathematicians. In *The new mathematics encyclopedia* (Vol. 56, pp. 23-45). Subotica: Faculty of Economics.

## C. UNPUBLISHED WORKS

➲ **Paper presented at a meeting or a conference**

Ljubojević, K., Tanasijević, V., Dimitrijević, M. (2003). *Designing a web form without tables*. Paper presented at the annual meeting of the Serbian computer alliance, Beograd.

➲ **Paper or manuscript**

Boškov, T., Strakić, F., Ljubojević, K., Dimitrijević, M., & Perić, O. (2007. May). *First steps in visual basic for applications*. Unpublished paper, Faculty of Economics Subotica, Subotica.

➲ **Doctoral dissertation**

Strakić, F. (2000). *Managing network services: Managing DNS servers*. Unpublished doctoral dissertation, Faculty of Economics Subotica, Subotica.

➲ **Master's thesis**

Dimitrijević, M. (2003). *Structural modeling: Class and object diagrams*. Unpublished master's thesis, Faculty of Economics Subotica, Subotica.

## D. ELECTRONIC MEDIA

The same guidelines apply for online articles as for printed articles. All the information that the online host makes available must be listed, including an issue number in parentheses:

Author, A. A., & Author, B. B. (Publication date). Title of article. *Title of Online Periodical, volume number*(issue number if available). Retrieved from http://www.anyaddress.com/full/url/

➲ **Article in an internet-only journal**

Tanasijević, V. (2003, March). Putting the user at the center of software testing activity. *Strategic Management*, *8* (4). Retrieved October 7, 2004, from www.ef.uns.ac.rs/sm2003

➲ **Document from an organization**

Faculty of Economics. (2008, March 5). *A new approach to CRM*. Retrieved July 25, 2008, from http://www.ef.uns.ac.rs/papers/acrm.html

➲ **Article from an online periodical with DOI assigned**

Jovanov, N., & Boškov, T. A PHP project test-driven end to end. *Management Information Systems*, 2 (2), 45-54. doi: 10.1108/06070565717821898.

➲ **Article from an online periodical without DOI assigned**

Online journal articles without a DOI require a URL.

Author, A. A., & Author, B. B. (Publication date). Title of article. *Title of Journal, volume number*. Retrieved from http://www.anyaddress.com/full/url/

Jovanov, N., & Boškov, T. A PHP project test-driven end to end. *Management Information Systems*, 2 (2), 45-54. Retrieved from http://www.ef.uns.ac.rs/mis/TestDriven.html.

## REFERENCE QUOTATIONS IN THE TEXT

➲ **Quotations**

If a work is directly quoted from, then the author, year of publication and the page reference (preceded by "p.") must be included. The quotation is introduced with an introductory phrase including the author's last name followed by publication date in parentheses.

According to Mirković (2001), "The use of data warehouses may be limited, especially if they contain confidential data" (p. 201).

> Mirković (2001), found that "the use of data warehouses may be limited" (p. 201). What unexpected impact does this have on the range of availability?

If the author is not named in the introductory phrase, the author's last name, publication year, and the page number in parentheses must be placed at the end of the quotation, e.g.

> He stated, "The use of data warehouses may be limited," but he did not fully explain the possible impact (Mirković, 2001, p. 201).

➲ **Summary or paraphrase**

> According to Mirković (1991), limitations on the use of databases can be external and software-based, or temporary and even discretion-based. (p.201)

> Limitations on the use of databases can be external and software-based, or temporary and even discretion-based (Mirković, 1991, p. 201).

➲ **One author**

> Boškov (2005) compared the access range…
>
> In an early study of access range (Boškov, 2005), it was found...

➲ When there are **two authors**, both names are always cited:

> Another study (Mirković & Boškov, 2006) concluded that…

➲ If there are **three to five authors**, all authors must be cited the first time. For subsequent references, the first author's name will cited, followed by "et al.".

> (Jovanov, Boškov, Perić, Boškov, & Strakić, 2004).

In subsequent citations, only the first author's name is used, followed by "et al." in the introductory phrase or in parentheses:

> According to Jovanov et al. (2004), further occurences of the phenomenon tend to receive a much wider media coverage.
>
> Further occurences of the phenomenon tend to receive a much wider media coverage (Jovanov et al., 2004).

In "et al.", "et" is not followed by a full stop.

➲ **Six or more authors**

The first author's last name followed by "et al." is used in the introductory phrase or in parentheses:

> Yossarian et al. (2004) argued that…
>
> … not relevant (Yossarian et al., 2001).

➲ **Unknown author**

If the work does not have an author, the source is cited by its title in the introductory phrase, or the first 1-2 words are placed in the parentheses. Book and report titles must be italicized or underlined, while titles of articles and chapters are placed in quotation marks:

> A similar survey was conducted on a number of organizations employing database managers ("Limiting database access", 2005).

If work (such as a newspaper editorial) has no author, the first few words of the title are cited, followed by the year:

> ("The Objectives of Access Delegation," 2007)

**Note:** In the rare cases when the word "Anonymous" is used for the author, it is treated as the author's name (Anonymous, 2008). The name Anonymous must then be used as the author in the reference list.

➲ **Organization as an Author**

If the author is an organization or a government agency, the organization must be mentioned in the introductory phrase or in the parenthetical citation the first time the source is cited:

> According to the Statistical Office of the Republic of Serbia (1978), …

Also, the full name of corporate authors must be listed in the first reference, with an abbreviation in brackets. The abbreviated name will then be used for subsequent references:

> The overview is limited to towns with 10,000 inhabitants and up (Statistical Office of the Republic of Serbia [SORS], 1978).

> The list does not include schools that were listed as closed down in the previous statistical overview (SORS, 1978).

➲ When citing **more than one reference from the same author**:

> (Bezjak, 1999, 2002)

➲ When several **used works by the same author were published in the same year**, they must be cited adding a, b, c, and so on, to the publication date:

> (Griffith, 2002a, 2002b, 2004)

➲ **Two or more works in the same parentheses**

When two or more works are cited parenthetically, they must be cited in the same order as they appear in the reference list, separated by a semicolon.

> (Bezjak, 1999; Griffith, 2004)

➲ **Two or more works by the same author in the same year**

If two or more sources used in the submission were published by the same author in the same year, the entries in the reference list must be ordered using lower-case letters (a, b, c…) with the year. Lower-case letters will also be used with the year in the in-text citation as well:

> Survey results published in Theissen (2004a) show that…

➲ To **credit an author for discovering a work**, when you have not read the original:

Bergson's research (as cited in Mirković & Boškov, 2006)…

Here, Mirković & Boškov (2006) will appear in the reference list, while Bergson will not.

➲ When **citing more than one author**, the authors must be listed alphabetically:

(Britten, 2001; Sturlasson, 2002; Wasserwandt, 1997)

➲ When there is **no publication date**:

(Hessenberg, n.d.)

➲ **Page numbers must always be given for quotations**:

(Mirković & Boškov, 2006, p.12)

Mirković & Boškov (2006, p. 12) propose the approach by which "the initial viewpoint…

➲ **Referring to a specific part of a work**:

(Theissen, 2004a, chap. 3)

(Keaton, 1997, pp. 85-94)

➲ **Personal communications, including interviews, letters, memos, e-mails, and telephone conversations**, are cited as below. (These are *not* included in the reference list.)

(K. Ljubojević, personal communication, May 5, 2008).

## FOOTNOTES AND ENDNOTES

A few footnotes may be necessary when elaborating on an issue raised in the text, adding something that is in indirect connection, or providing supplementary technical information. Footnotes and endnotes are numbered with superscript Arabic numerals at the end of the sentence, like this.[1] Endnotes begin on a separate page, after the end of the text. However, Strategic Management journal **does not recommend the use of footnotes or endnotes.**

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