What do Micro Firms care about and how do they measure it? The Case Study of two Transitional CEE Countries*

*Aleksandar Jankulović, Vladimir Skorić,***

Abstract

The participation and importance of small and medium enterprises (SMEs) and Micro enterprises (MEs) in developing countries is at a high level. The aim of this study is to explore correlation between MEs profile and profile of MEs owner-managers with the level of performance measurement implementation, which performance indicators are most important for MEs in Serbia and Bosnia and Herzegovina and which factors influence on performance measurement implementation. In these economies the performance indicators are not monitored systematically but it is the process that depends only on current assessment what to measure, a great majority of performance indicators are based on individual case – used only in one MEs, most frequently are used financial indicators, innovation and learning measurement indicators are neglected, on average five indicators are used and there are significant influence of profiles of MEs and their owners-managers on performance measurement. Based on these results among others, the paper contributes to the understanding of the level of implementation of performance measurement indicators and gives the roadmap for improvement.

Keywords: Performance measurement, Balanced Scorecard (BSC), Transitional country, SMEs, MEs, CEE countries,

1. Introduction

SMEs are the engine of the European economy and they drive job creation and economic growth, and ensure social stability (EC Commission, 2015). SMEs are defined as businesses which employ less than 250 staff and have an annual turnover of less than €50 million and / or their balance sheet total is less than €43 million (EC Commission, 2014). Micro enterprises (ME) are defined by the same source as the companies with employ less than 10 staff, annual turnover of less than or equal to €2 million and / or their balance sheet total is less than €2 million.

In the years 2010 and 2011, according to the report on implementation of the European Commission (2012), it is stated there were up to 20.8 million of SME in the EU, 19.2 million of which were micro-firms with less than 10 employees. Despite the slight decrease in the number of SMEs, European Commission (2012) has concluded that in the years 2010 and 2011 “SMEs with their turnover have retained their position of "spine" of the European economy".

* Received: 29.12.2015, accepted: 7.3.2017, 3 revisions.

** Dr Aleksandar Jankulović (corresponding author), Associate professor, Belgrade Metropolitan University, Faculty of Management, Tadeusa Košćuška 63, 11000 Belgrade, Serbia. Mail: aleksadar.jankulovic @metropolitan.ac.rs.
MSc Vladimir Skorić, PhD student, Singidunum University, Belgrade, Serbia.

Classification of enterprises under the ME category is done using local legislation. In Republic of Serbia SME sector includes micro, small, and medium-sized enterprises (SMEs) and sole traders (NARD, 2013). According to the Law on accounting and auditing (2013) ME in Republic of Serbia are defined as companies with employ less than 10 staff, annual turnover up to €0.7 million and/or average value of assets 350.000€. In comparison to the EU, in Republic of Serbia, percentage of SME in the total number of enterprises is slightly larger and according to the figures from National Agency for Regional Development of the Republic of Serbia (NARD, 2014), in the year 2013 quantified 99.8% of the total number of enterprises (315.906), from which 96.35% were MEs. In the entity of Bosnia and Herzegovina, the Republic of Srpska, during the same reporting period, SME and craft shops accounted for 99.6% of the total number of firms (38.324), from which 94.23% were MEs (RARS, 2015).

According to the data from the official Competitive and innovation small and medium enterprises development strategy for the period of 2008-2013 (2008) entrepreneurs in the Republic of Serbia are aware of the lack of essential knowledge and skills; however they do not adequately use opportunities for additional training. Technical and technological lag and lack of competitiveness of Serbian economy are still defined as key limiting factors for more efficient involvement in international trends (NARD, 2012).

According to SMEs participation in economy, business development and entrepreneurship of SMEs is a key driver of national economy competitiveness in world market. This is of more great importance for developing transitional countries from state to market economy since they have newly established system of entrepreneurship and they have to compete with developed economies in open trade market. One of the most important elements of success in management in SMEs in transitional countries is performance management (Jankulovic and Skoric, 2013). Therefore the investigation of performance measurement implementation in SMEs, and especially in MEs in transitional countries is of great importance.

The aim of this study is to explore correlation between MEs profile and profile of MEs owner-managers with the level of performance measurement implementation and on that basis to research the performance indicators from Balanced Scorecard (BSC) that are implemented in a transitional countries like Serbia and Bosnia and Herzegovina. The study contributes to the understanding of the level of implementation of performance measurement indicators and gives the roadmap for improvement according to found gaps in performance implementation. This study proposed to examine the relationship between the performances of MEs in transitional countries with the factors that influence it.

This paper is organized as follows. A review of the literature presents the analysis of implementation of performance indicators in SMEs especially distinction

between non-financial and financial measures. The research methods section outlines how the research topic emerged and describes the research approach taken. This is followed by a section outlining results from analysed MEs in transitional countries like Serbia and Bosnia and Herzegovina. Finally conclusions are made from literature and research data integrating different variables and the results obtained are discussed.

2. Literature review

Existence of SME and entrepreneurs are the corner stone of the economic development of transitional countries. Entrepreneur and therefore SMEs at their beginning are at the forefront of the transitional economy and the entrepreneur can be identified as a catalyst for change and progress (Tanas and Audretsch, 2011). Entrepreneurs serve as catalysts for economic advancements as they promote new ideas and new market structure (Minniti, 1999). It appears that the fundamental aspect of any economy is how to promote entrepreneurial activity. As argued by Schumpeter (1934/1963), the key to the success of market lies in the spirit of entrepreneurs who persist with their idea and vision. It may therefore be stated that entrepreneurial operation and ultimate success plays a fundamental role (Kirzner, 1997) in the creation of healthy and well-functioning change to market economy.

On the other hand performance measurement is of great importance for successful entrepreneurship. Performance management can be defined as the process of quantifying action, with measurement as a process of quantification and action leads to performance (Neely et al., 1995). Since the mid-1980 s, increasing attention has been given to the study of performance measurement systems (PMS).Very little empirical and theoretical research has been carried out in PMS in SMEs. The countries where a number of research has been carried out are Australia, Finland, the UK and Denmark (Garengo et al., 2005). Garengo et al. (2005) indicate that performance measurement system can play a key role in supporting managerial growth especially in SMEs. However, Hvolby and Thorstensen (2000) suggest that only the most critical performance indicators should be selected and utilised because SMEs have severely constrained resources. Competitiveness cannot be achieved without managing performance and at the same time developing the skills and competence of employees. Performance management potentially makes the most significant contribution to individual and organizational learning and helps to raise organizational efficiency and promote growth (Adhikari, 2010).

Empirical research on performance measurement in SMEs is still rather rare and research needs on this subject have been identified on a recurring basis (Garengo et. al., 2005) and especially in transitional countries (Jankulovic and Skoric, 2013; Sevic, 2005). In case of Serbia, Jankulovic and Skoric (2010) find that

SMEs show lower levels of interest in collection performance measures and analysis. The main barriers and obstacles in PMS implementation are employees on the lower level and relationships between owner/management and employees.

It is important to distinguish an objective from performance perspective. The objective is the raison and the cause of action and acting of the company and on the other hand performance criteria show how results are obtained, how objectives have been achieved or how objectives can be achieved (Kaplan and Norton, 1992).

According to literature analysis there are a great number of different models for performance measurement (Raymond et al., 2013; EFQM, 2003; Kaplan and Norton, 1996). Engle et al. (2008), presented the importance of global standardization and local customization in global performance management. Therefore diversity of various approaches and experiences of PMS systems within different cultural and economic heritages is valuable factor.

2.1 Financial and non-financial measures

One of the important factors in performance management is the *financial and nonfinancial nature of measures*. The suggestion of Hayes et al. (2005) that the opportunities for creating value in organisations are shifting from managing and measuring tangible assets to managing and measuring knowledge based strategies that develop an organisation's intangible assets is of great importance.

Kaplan (1980) in his paper in mid-1980 s, stated that corporation have high awareness that the assumptions underlying many traditional financial measures of performance are inadequate in that period's operating environment, and that financial measures of performance alone can-not guide an organisation to market dominance.

Performance measures that are focused on financial metrics are used for a long period of time to provide operational control and external financial reporting in private sector organisations (Kuwaiti, 2004). New market development and globalisation force companies, especially in developing countries, need to consider their performance in terms of quality of service, flexibility, customization, innovation and rapid response (Neely, 2005). Findings of Thaker (2011) prove evidence of the evolution of Business Performance Management to overcome the inadequacies of reliance on accounting based performance measurement to a strategic management system and more recently management learning.

Although financial performance has often been presumed to be the only form of performance sought by small business managers, (Wiklund et. al., 2003) findings suggest that noneconomic concerns may be more important than financial outcome. A financial aspect of measures is not enough and complete for analysis of the firm's capacity to respond to the expectancies of its stakeholders and does

not allow the identification of successful SMEs (Raymond et. al., 2013). This narrow conception of performance has long dominated, in the entrepreneurship literature and has influenced the governments, public agencies and other stakeholders seeking to support and assist small businesses (Blackman, 2001).

The dimensions of performance initially operationalized in the empirical literature were mainly *financial* (profitability, liquidity and financial health), then more balanced with an *operational perspective* (costs, responsiveness, quality, productivity and flexibility) (Marchand and Raymond, 2008).

Study of Gerschewski and Xiao (2014) indicates that financial performance measures are generally viewed as more important than operational indicators. Lau (2011) confirm that nonfinancial measures significantly influence managerial performance through role clarity. They also pointed that manufacturing firms generally place more importance on financial performance than service firms. In our study we confirm the influence of financial and non-financial measures and differences of implementation in production and service MEs.

2.2 Owner/manager and ME profile influence on performance measures

The importance of the manager, who is often the owner, is of great importance for understanding and attempting to explain small business performance (Bruyat and Julien, 2000). According to Steyaert and Katz, 2004), small business performance may be viewed as socially constructed, that is as socially constructed, that is having social outcomes, that are as important as economic outcomes.

In SME strategic planning of performance measurement does not exist, performance measurement is rather unstructured, reactive and spontaneous, and regular measurement of performance aspects other than financial is rarely practised (Barnes et al. 1998). On the other hand the prescribed approaches, developed for large enterprises, are not adapted in practise to the specificities of SME. Therefore further knowledge is needed on performance measurement models that would be appropriate for SMEs and their implementation in different businesses and countries (Garengo et. al., 2005).

Ahmad and Zabri (2016) in their study reveals that there are significant relationships between size of the firm, involvement of owner/manager and modern technology and use of non-financial performance measures. Van der Stede et al. (2006) argued that regardless of strategy, organizations with more extensive PMS especially those that included non-financial measures have better overall performance. The role of managers has been analysed in many studies (Tung et al. 2011; Kennerly and Neely, 2002). Also one of the main drivers that were investigated in literature is the size of the firm (Ahmad and Zabri, 2016). This study reveals that top management commitment and leadership are key factors for PMS. In our study we investigate all of these factors and confirm some of

them but also the facts that are not mentioned in literature like the particular influence of education and age of owner-managers as well as influence of export on foreign markets and foreign partnership in enterprises.

According to analysis of Lithuanian SMEs (Venckeviciute and Subaciene, 2015), more than a half companies measures performance monthly or quarterly, 22% respondents measure performance every half year and only 10% measure performance less than twice a year. Burney and Widener (2007) argue that the lack of systematic empirical evidence on the relationships between performance measurement systems and individual behaviours constitutes a black box and an important gap in the literature that need research attention. Also in our research we confirm these findings.

Meyer (2002) suggests that while financial measures may be relevant to managers at strategic business level, they are inappropriate for the evaluation of managers at below business unit level. Also Abdel-Maksoud et. al. (2005) found that at shop-floor level, much of the performance measurement is nonfinancial. Performance evaluations are important to employees because it is usually tied with remuneration packages.

According to all these previously mentioned, the influence of structure of MEs and owners-managers of MEs are of great importance for business success and they have direct influence on performance measurement. Therefore in our study we reveal these questions for MEs in transitional countries like Serbia and Bosnia and Herzegovina.

2.3 Balanced scorecard and performance measures

Performance measurement frameworks have been proposed by a number of researchers, each of these frameworks adopting a specific management perspective. One of the most recognized frameworks, who firstly included non-financial measures, a strategy-based perspective was adopted by Kaplan and Norton (1992, 1996) to develop their Balanced Scorecard (BSC) framework (BSC), whereas a stakeholder-based perspective was adopted by Neely et. al. (2002) to develop their Performance Prism framework.

According to the literature data, recent scientific articles show increased popularity and usage of BSC. According to CIMA's survey (CIMA, 2009), the BSC is the most popular tool and considered as the one most likely to be adopted soon. BSC was found to be the fifth most widely used management tool across the globe which also had one of the highest overall satisfaction ratings according to a multi-year research project launched since 1993 by consulting firm Bain & Company, which was implemented and evaluated also in May 2013 (Rigby and Bilodeau, 2013). Giannopoulos et al. (2013) point out that BSC is a performance measurement and strategic management system which appears suitable for use

by all types and sizes of business which is realised through 4 generations (Kadarova et al., 2014). Survey realized by 2GC Active Management (2013), show that almost 75% of those who implemented BSs said that it was very or extremely useful. The BSC is performance management system where object of measurement are divided into four groups of factors: *Customer perspective*, *Internal business perspective*, *Innovation and learning perspective* and *Financial perspective*. Kaplan and Norton (1992), authors of this concept, define that BSC balance both the financial and non-financial measures that a company uses. Considering the importance of BSC for success in business, our study reveals usage of different groups of performance indicators in MEs in transitional countries.

One of the most important factors, mentioned also in BSC, according to literature analysis, in performance management implementation is *knowledge transfer – innovation and learning*. Knowledge appears to be widely emphasized as a critical resource for an organizational success, and knowledge transfer in supporting knowledge management initiatives is acknowledged (Albino et al., 1999). Argote and Ingram (2000) defined knowledge transfer as the process through which knowledge is acquired in one situation and applied to another. Same authors argued an organization that promotes the transfer of knowledge among its members is more productive and more likely to survive than an organization that does not. Finally, same other authors point out that individuals that implement knowledge transfer are of a great importance and they are one of the prime motivators for successful implementation of performance measurement systems. Also it is found that effective allocation of resources for the development and growth of early stage ventures is a continuous challenge for their equity stakeholders and that the intellectual capital is a critical resource for entrepreneurial performance driven by new knowledge development and technological innovation (Ng et al., 2014). Therefore in our study we give special attention to the question of Innovation and learning and investigate the participation and influence of this question in MEs in transitional countries. Also it is important for performance measurement implementation that SME that have implemented an integrated management system are using a greater extent of performance indicators related to customer satisfaction than those which do not have an integrated management system (Olaru et al., 2014).

According to literature analysis, in our study we identified a significant gap in research of implementation performance indicators, influence of MEs profile and owners/managers on performance measures especially in transitional countries. Analysis of literature also reveals the need for further research considering most used performance indicators, and gives suggestions for further improvements in business sector in analysed countries and wider in transitional countries. This study endeavours to close this gap and add to existing knowledge about the usage of exact performance measures and the influence of enterprise structure and owner/manager profile. The benefit of this study and relevance is

in uncovering influential factors in the field of performance measurement in MEs in transitional countries and the place for further improvement of doing business.

3. Research methodology

This research was conducted as a descriptive study. For the purposes of this research process, the research methodology defined by Forza (2002) was used, adapted and suggested for various types of survey in Operations management (OM). Performance measurement is on the other side one of the main issues in the field of efficiency of enterprises and therefore in the field of OM. It represents a system of research which is composed of six steps: Definition of the theoretical basis, Research design, Pilot testing, Data collection, Analysis of data and Generating reports. Based on the defined aim of the study, research process was organized into further direction according to the following hypothesis:

H1. Performance measurement in ME depends on profile of MEs

H2. Performance measurement in ME depends on profile of MEs owner-manager

H3. Performance indicators that are measured in MEs are measured ad hock and not in regular and previously defined period of time

H4. A great majority of performance indicators are based on individual case – used only in one MEs

H5. Most of the performance indicators belong to financial perspective group of BSC and smallest number of indicators belongs to innovation and learning perspective.

Research design: For the purpose of achieving previously mentioned objectives, research process was organised in order to identify the number and type of performance indicators which are used by owner-managers in ME in the process of performance measurement, to investigate the existence of statistical correlation and the intensity of eventual relationship as well as to suggest further directions of knowledge transfer in performance measurement towards MEs.

Research has been conducted in the two cities of Republic of Serbia (Belgrade, Kragujevac) and in one city (Banja Luka) in Republic of Bosnia and Herzegovina. The process of data collection was executed by surveying the ME owners who are in the same time registered as general managers, while the analysis was realized by using standard statistical tools and SPSS software.

The following factors were used to investigate the correlation between MEs profile and performance measurement: Company age, Type of business activity (production or service based), Percentage of foreign ownership in ME and Type

of market in which ME operates (domestic or export), Possession of one or more of defined quality management standards (ISO 9001, ISO 14001, ISO 18001, ISO 22001, ISO 27001, HACCP, HALAL.) Correlation between the MEs owner-manager profile and performance measurement was investigated using the following factors: Gender, Working experience and Level of education.

Correlation between both profiles, and performance measurement has been done through three criteria:

1. *C1: The total number of performance indicators monitored in MEs,*
2. *C2: The minimum number of performance indicators monitored in MEs regardless BSC category,*
3. *C3: The minimum number of performance indicators per BSC groups of factors monitored in MEs*

In order to find minimum number of performance indicators monitored in MEs regardless BSC category the following rules were defined:

- $X >= 4$: If the total number of performance indicators is greater or equal to 4, then it is considered that the MEs owner-managers monitor the performance
- $X < 4$: If the total number of performance indicators is less than 4, then it is considered that the MEs owner-managers do not monitor the performance to a sufficient level.

In order to find the minimum number of performance indicators per BSC category and answer on discrepancy between application of financial and non-financial performance indicators the following rules were defined:

- $Xi >= 1$, $\Sigma Xi >= 4$, $i = 1,2,3,4$ – MEs owner-managers monitor performance for each group of factor within the BSC model.
- $Xi < 1$, $\Sigma Xi < 4$, $i = 1,2,3,4$ – MEs owner-managers do not monitor the performance for each group of factor within the BSC model (monitor just one parameter within one BSC group of factors).

The answer on most frequently used performance indicators in total and per BSC category was researched using frequency of the performance indicator implementation and the period when the performance indicator is used (ad hoc, daily, weekly, monthly, quarterly and annual).

The target sample of this study represents the citizens of the Republic of Serbia employed in MEs registered according to the Law on Registering Business Subject (2009) and citizens of the Republic of Bosnia and Herzegovina registered according to the Law on Registering Business Subjects in Republic of Srpska. (2009). The observed discrepancies in the involvement of MEs in the regions influenced the fact that the research was carried out in the leading regions, Bel-

grade, and Banja Luka. Some of the differences between the towns in Republic of Serbia and Republic of Bosnia and Herzegovina might be based on different institutional settings, legislations and business environment. Strategic investments undertaken in the economy of the region of Sumadija have affected the study to include a third area, the area of the city of Kragujevac. In the interest of equal consideration of the situation in these regions, it is defined that in each of the study areas, a minimum of 30 relevant interviews should be done.

Pilot testing. Pilot testing was carried out in two ME in Belgrade after which was decided to include the possession of quality standards as one of the criteria. The procedures of the administration and research management, management irrelevant data and data cleansing procedures, and procedures for evaluating measurement quality research were created.

Data collection. Research and data collection was carried out in the form of an interview on the pre-determined questions. Collection of data was held in 2015. The questionnaire was composed of twelve questions (eight structured and four semi-structured) within four categories of issues: the profile of ME, the profile of MEs owner-manager, the performance measurement in MEs, and the quality management system in MEs. The process of data collection was executed by interviewing the owner-managers. During the research process, 96 questionnaires are collected. In order to obtain reliable data interviews and to control the quality of the results, interviews were scheduled in accordance with the availability of the respondents. This action created an atmosphere in which respondents made detailed answers on all questions. Data collection process lasted four months. Data cleaning was conducted using predefined procedures for the management of irrelevant data and data cleaning.

Data analysis and generating report. Analysis of treated data was carried out using the SPSS software version 1.6. Considering that the aim was to determine the association and dependencies between performance indicators, data analysis was carried out by chi-square test, Cramer's V test, Kolmogorov-Smirnov test, Man-Whitney U test and Kruskal Wallis test. Reports are presented in chapter 4 and 5 in this paper.

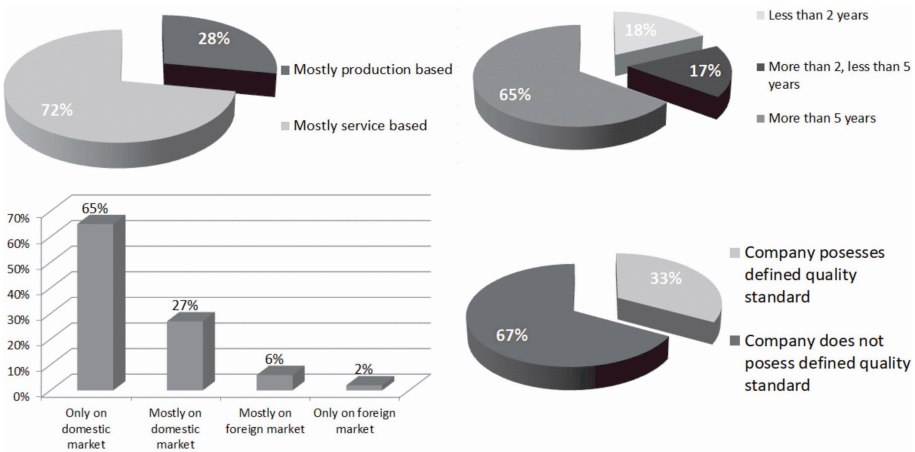
4. Results

Through the realization of the process of data collection, entering, processing and data analysis 90 out of 96 relevant questionnaires were obtained, 30 questionnaires per each region being investigated. Based on these answers, results are presented in accordance with defined directions of the research.

4.1 MEs profile

The largest number of responses within this research was obtained from MEs that are older than five years. The percentage of newly-founded enterprises was 16%. From the type of activity of MEs perspective, in this research, enterprises that are dealing with service activities were prevailing (71%). MEs that operate on the domestic market only or in the majority of cases make 92% of the total number of enterprises that were examined, while only 8% of enterprises put its products or services on the foreign market. Realised percentage ratio between so called ‘’mature” enterprises and “newly-founded” enterprises contribute to the relevancy of conclusions at regional level.

Figure 1. Profile of MEs presented by criteria enterprise age, type of activity, participation on domestic and foreign markets

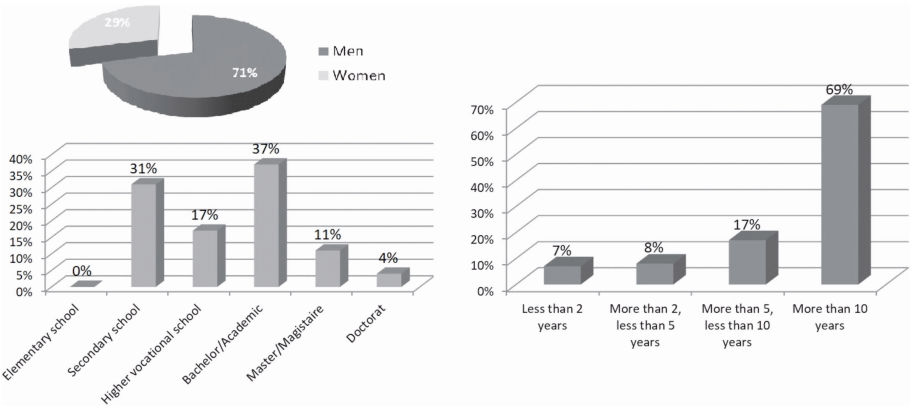


4.2 MEs owner-manager profile

Out of the total number of business entities and shops only 26% are women entrepreneurs (SECONS, 2011). In this research, one in three respondents was female, which is consistent with the current percentage share of women entrepreneurship.

In the survey mostly participated respondents with higher academic education (52%), respondents with higher vocational education (17%) and respondents with secondary education (31%). Within the research no cases were found that MEs owner-manager finished elementary school only. The results show that the vast majority of the MEs owner-managers have significant work experience; actually 69% of respondents have more than 10 years of work experience. In addition, research results show that there is a significant percentage of MEs owner-managers that have less than 5 years of work experience (15%).

Figure 2. Profile of MEs owner-manager presented by criteria gender, level of education and working experience



4.3 Performance indicators in MEs

In total, during the research process 231 different performance indicators was found. Majority belongs to the financial perspective (46%) of BSC, 30% to the category internal business perspective, 17% to customer perspective and only 7% to innovation and learning perspective. These results confirmed hypothesis H5 that most of the performance indicators belong to financial perspective group of BSC and smallest number of indicators belongs to innovation and learning perspective. Also, a great majority (77,5%) were performance indicators based on individual case and used only in one MEs which confirmed hypothesis H4.

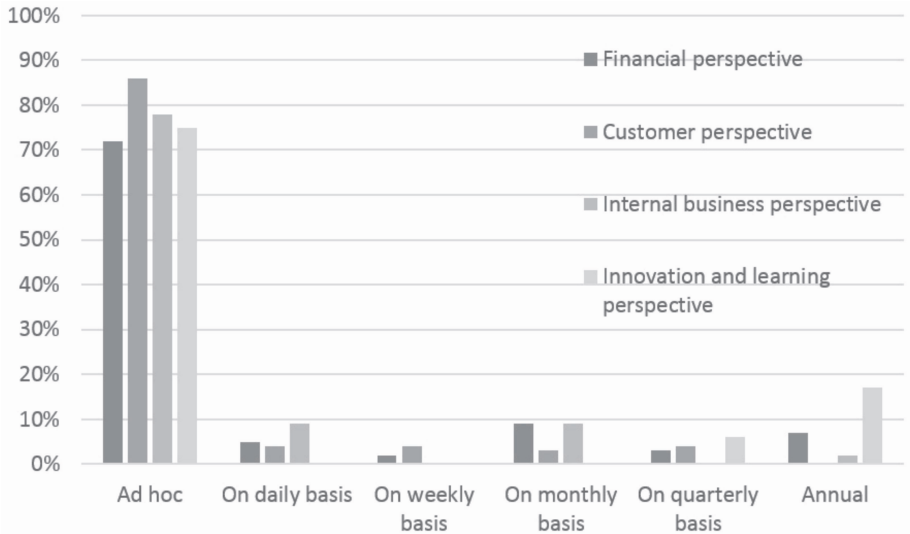
Most frequently used performance indicators by MEs owner-managers are: income, total expenses, gross profit, total costs of employee's salaries, customer satisfaction, number of customers/clients, realised production capacities, distribution efficiency, percentage of waste and actual results vs planned results of training processes. In Table 1 are presented five most common performance indicators in all 4 BSC groups of factors that are found in researched enterprises.

Table 1. Five most common performance indicators per four BSC groups of factors

No	Financial Perspective		Customer Perspective		Internal business perspective		Innovation and learning perspective	
	A	B	A	B	A	B	A	B
1	Gross Income	32,78%	Customer satisfaction	18,80%	Percentage of used capacities	4,40%	Actual results vs planned results of training processes	18,20%
2	Total expenses	13,28%	Number of customers/ clients	8,80%	Period for goods delivery	4,40%	Number of realized training courses	9,10%
3	Gross profit	3,32%	Number of new customers /clients	8,80%	Period for goods storage in warehouse	4,40%	Results of training courses	9,10%
4	Total costs of employee's salaries	2,49%	Number of customers who use our product (service) again	7,50%	Waste percentage	4,40%		
5	Net profit rate	2,07%	Number of reclamation	5,00%	Business efficiency	3,30%		
A – Name of the performance parameter B – Parameter participation in one BSC group								

According to gained results from research, vast majority of performance indicators that are measured are measured ad hock and not in regular and previously defined period of time which confirmed hypothesis H3. Only in category Innovation and learning there are some evidence of regular measurement annually.

Figure 3. Period of performance measurement of performance indicators per 4 BSC groups of factors



4.4 Correlation between MEs profile and performance measurement

Research of correlation between MEs profile and performance measurement according to three defined criteria in research methodology, statistically relevant correlation was determined in seven cases presented in table 2.

Table 2. Statistically important correlations between MEs profile and performance indicators.

MEs profile/ Scenario	Age of enterprises	Type of activity	Percentage of foreign capital in ME	Type of the market in which ME operates	Quality standards existence
Scenario 1: Total number of indicators	Hi^2=5.743 df=2; p=0.057>0.05	Hi^2=4.866; df=3; p=0.182>0.05	Z= -2.289; p=0.022≤0.05	Hi^2=12.402 df=3; p=0.006≤0.05	Z= -1.225; p=0.220>0.05
		√		√	
Scenario 2: The minimum number of indicators (min 4 regardless BSC groups of factors)	Hi^2=7.619; df=2; p=0.022≤0.05	Hi^2=3.065; df=3; p=0.382>0.05	Hi^2=0.758; df=1; p=0.384>0.05	Hi^2=10.404; df=3; p=0.015≤0.05	Hi^2=0.000; df=1; p=1.000>0.05
	√			√	
Scenario 3: The minimum number of indicators per BSC groups of factors (min 1 per BSC groups of factors)	Hi^2=2.246; df=2; p=0.325>0.05	Hi^2=9.340; df=3; p=0.025≤0.05	Hi^2=5.277; df=1; p=0.022≤0.05	Hi^2=33.206; df=3; p=0.000≤0.05	Hi^2=3.361; df=1; p=0.067>0.05
		√	√	√	

Total number of performance indicators (H1.C1):

According to the criterion of the total number of performance indicators to be monitored by the owner-managers in the MEs statistically significant correlation was determined based on the type of MEs activity. On the basis of the value of statistical indicators of the size of influence r = 0.241, it is shown that the connection is a medium strength. Owners-managers predominantly productive MEs track of multiple performance indicators in relation to the owners mainly service based MEs. On the other hand, owner-managers of MEs operating one part abroad are following the larger number of performance indicators than in MEs which operate mostly or solely on the domestic market.

The minimum number of performance indicators regardless BSC category (H1.C2):

A statistically significant correlation between the profile of MEs and the minimum number of performance indicators that are tracked by their owner-managers was found in the age criteria of the enterprise and the type of market in which MEs operates. In the case of the criterion of enterprise age, based on statistical indicators Kramer V which is 0.291 and coefficient of contingency of 0.279, it was concluded that the connection is a medium strength. In the case of the criterion type of market in which MEs operates, based on indicators Kramer V, which amounts to 0.342 and contingency coefficient of 0.324 it was concluded that the connection is a medium strength. If enterprise is older it does not mean that it tracks more performance indicators, but the research reveals that the older enterprise follow a minimum of four performance indicators regardless of the categories defined by the model of the BSC. In addition, owner-managers whose MEs operating any percentage on the international market in a big probability track a minimum of four performance indicators.

The minimum number of performance indicators per BSC category (H1.C3):

A statistically significant correlation between the MEs profile and the criteria that owner-manager of that MEs uses at least one performance indicator per BSC group of factors was found within the criteria: Type of activity, Percentage of foreign capital in ME and Type of the market in which MEs operates. In case of type of activity, based on the values of statistical indicators fi coefficient (-0.242) and contingency coefficient (0.235) it was concluded that the connection was a low strength. In case of the percentage of foreign capital in MEs, based on the results of Kramer V (0.322) and contingency coefficient (0.307) it was concluded that the connection was a medium strength. A connection of a high strength was found in case of the market in which MEs operates, according to the results of the Kramer V (0.611) and contingency coefficient (0.521). Mostly production based MEs track their performance in slightly higher percent-

age than mostly service based MEs. MEs owner-managers in which percentage of foreign capital leads to 50% measure in significantly higher percentage at least one performance indicator than the owner-managers in other MEs. In addition, owner-managers whose MEs operating any percentage on the international market in a big probability track a minimum one parameter per BSC group of factors.

According to previously stated results, hypothesis H1 is confirmed thatperformance measurement in MEs depends on profile of MEs.

4.5 Correlation between profile of MEs owner-managers and performance measurement

Research of correlation between profile of MEs owner-managers and performance measurement according to research questions and criteria defined in research methodology, statistically relevant correlation was determined in one case presented in table 3.

Table 3. Statistically important correlations between profile of MEs owner/top management and performance indicators.

MEs owner profile/ Scenario	Gender	Work experience	Level of education
Scenario 1: Total number of indicators	Z= -0.942; p=0.346>0.05	Hi^2=1.544; df=3; p=0.672>0.05	Hi^2=8.277; df=4; p=0.082>0.05
Scenario 2: The minimum number of indicators (min 4 regardless BSC groups of factors)	Hi^2=0.662; df=1; p=0.416>0.05	Hi^2=2.433; df=3; p=0.487>0.05	Hi^2=12.496; df=4; p=0.014≤0.05
			√
Scenario 3: The minimum number of indicators per BSC groups of factors (min 1 per BSC groups of factors)	Hi^2=0.065; df=1; p=0.799>0.05	Hi^2=0.976; df=3; p=0.807>0.05	Hi^2=6.336; df=4; p=0.175>0.05

The statistical correlation between the profile of the MEs owner-managers and performance measurement is found only in one case. In the case of educational level on the basis of indicators Kramer V, which is 0.373 and contingency coefficient 0.349, it was concluded that the connection is a medium strength. MEs owner-managers who have acquired higher education are following a minimum of one performance indicator regardless of BSC group of factors, while the owners-managers MEs with lower levels of education do not. According to these results hypothesis H2: Performance measurement in ME depends on profile of

MEs owner-manager is partially confirmed only in the case of educational level of owner-manager.

4.6 Correlation between defined profiles and performance indicators

In addition, the research included the analysis of statistics between the two researched profiles (profile of MEs and profile of MEs owner-managers) and the most commonly used performance indicators which is given in Table 1. A total of eight statistically significant relationships at five different performance indicators in the survey was conducted (table 4).

Table 4. Statistically important correlations between profile of MEs owner/top management and performance indicators

MES profile/ Performance indicators	MEs profile					MEs owner profile		
	Age of ME	Type of activity	Percentage of foreign capital in ME	Type of the market in which ME operates	Quality standards existance	Gender	Work experience	Level of education
Gross Income								√
Total expenses				√		√		
Number of customers/clients				√				
Number of new customers							√	
Utilization of capacities		√		√	√			

Statistically significant correlation was found between the indicator gross income and the criterion level of education. Based on the results of Kramer V (0.358) and coefficient of contingency (0.337) it could be concluded that the connection is a medium strength. MEs owner-managers with higher-education track their gross income significantly more than the MEs owners with lower level education.

Connection of a medium strength was found in relation between the indicator total expenses and the criterion type of the market in which MEs operates (Kramer V=0.349, contingency coefficient 0.330) and gender of MEs owner-manager (fi coefficient -0.321, contingency coefficient 0.305). Owner-managers whose MEs operating any percentage on the international market track their total expenses far more than other. In addition, men owner-managers are more focused on measuring total expenses than female owner-managers.

A medium strength correlation (Kramer V 0.367, contingency coefficient 0.344) between the indicator number of customers/clients and the criterion type of the market in which MEs operates was found. This parameter is followed significantly more by the owner-managers in export oriented MEs.

Statistically significant connection of high strength (Kramer V 0.443, contingency coefficient 0.405) between the parameter number of new customers/clients and the criterion working experience was found. The number of new customers/clients is tracked by the owner-managers who have less than two years of working experience in a highest percentage and then by the owners-manages who have more than 10 years of professional. The lowest percentage of owner-managers who use this indicator to measure the category Customer satisfaction was found in the group who have between 2 and 10 years of working experience.

Statistically signification correlations of a medium strength between the indicator percentage of used capacities and the criteria type of activity (fi coefficient -0.370, contingency coefficient 0.347), type of the market in which MEs operates (Kramer V 0.417, contingency coefficient 0.385), possession of quality standard (Kramer V 0.338, contingency coefficient 0.320) were found. Logically, the owner-managers of mostly production based MEs track this indicator far more than those in mostly service based MEs. Owner-managers whose MEs operating any percentage on the international market in a big probability use this parameter to measure the performance of Internal processes. Finally, percentage of used capacities is tracked significantly more by the owner-managers in MEs which possess one of the defined quality standards than in MEs which do not possess any.

4.7 Correlation between different regions

An analysis of three correlation criteria for research regions were also investigated. Statistically significant relationships (Hi^2=10.265; df=2, p=0.006) were found in first criteria (C1) which shows that the largest number of performance indicators are monitored in Belgrade, then in Kragujevac and then in Banja Luka. In case of second criteria (C2), medium significance was found (Hi^2=8.416; df=2, p=0.015, Kramer V 0.306, contingency coefficient 0.292) which shows that a minimum of one performance indicator are used most in Belgrade, then in Kragujevac and then in Banja Luka. In case of third correlation criteria (C3), regardless of the regions, enterprises in significantly higher percentage do not accompany a minimum of one indicator by category of BSC (Hi2=1.098; df=2, p=0.578).

Given that each of the categories of parameters are not normal distribution, Kruskal-Volis test proved that measuring finance, processes and innovation and learning depend significantly on the region $p \leq 0{,}05$ while measuring customers category does not show significant correlation $p > 0.05$ (table 5). In doing so, the most measured perspective Finance are in Belgrade, whereas categories of indicators such as customers, processes and innovation and learning are the highest monitored in Kragujevac. In addition, a minimum follow-up of categories of indicators Finances, Processes and innovation and learning is represented in Banja

Luka and customer category in Belgrade. Some of these differences between the cities in Republic of Serbia and Republic of Bosnia and Herzegovina which are evident could be based on different institutional settings, legislations and business environment.

Table 5: Analysis of four BSC groups of parameters in accordance with regions

	Finance	Customers	Processes	Human resources
Hi^2	14,896	1,103	25,408	8,803
Df	2	2	2	2
p	,001	,576	,000	,012

5. Discussion and conclusion

Study confirmed that in transitional countries performance measurement: depends more on ME profile than on MEs owner-manager profile, is ad-hoc process and is based on tracking mostly financial indicators.

With years of enterprise existence on market, ME owners-managers will not use a larger number of performance indicators nor will apply all perspectives of the model BSC. What we can conclude is that the ME owner-managers lead their companies measuring performance with a minimum of four performance indicators.

Most influencing factors within the ME profile are Type of the market in which ME operates and Type of the business activity. Owner-managers in MEs operating one part or solely abroad will follow more performance indicators, will follow minimum four indicators regardless BSC category and will track at least one indicator per BSC category than in MEs which are focused on domestic market. Owners-managers predominantly productive MEs track of multiple performance indicators in relation to the owners mainly service based MEs

In case of MEs owner-manager profile, owner-managers who have acquired higher education are following a minimum of one performance indicator regardless of BSC group of factors, while the owners-managers MEs with lower levels of education do not.

In analysed countries, performance indicators on any category are not monitored systematically, in a systematic manner determined by procedures, with defined structure and performance measurement period. It is the process that only depends on the owners-managers and their assessments what to measure and when. Performance indicators are based on individual case used only in particular MEs.

Micro enterprises care mostly about their finances. Financial performance indicators prevail in the total number of performance indicators used and in frequency of use, which proves the hypothesis that there are differences in the applica-

tion of financial and nonfinancial indicators. Distribution monitoring dominantly financial effects in relation to the non-financial effects is statistically determined and it is not dependent on the age of enterprises. On the other hand, as opposite, only 7% of all indicators are in the BSC group of innovation and learning, the area which is of great importance for the development of the countries in transition.

Research work shows that the owner-managers MEs will on average use five performance indicators in the process of performance measurement, three of which will surely be in finance, one of the areas of customers, and the last indicator from one of the remaining two categories of BSC. These five indicators will be not measured at the same time, but at the request of the owner.

The most commonly used performance indicators found in the research are: gross income; total expenses; number of customers / clients; number of new customers; utilization of capacities. MEs owner-managers with higher-education track their gross income significantly more than the MEs owners with lower level education. MEs owner-managers whose MEs operating any percentage on the international market will track their total expenses far more than other. In addition, men owner-managers are more focused on measuring total expenses than female owner-managers. The number of new customers / clients is tracked by the owner-managers who have less than two years of working experience in the highest percentage and then by the owners-manages who have more than 10 years of professional.

This paper contributes to the understanding of the level of implementation of performance measurement indicators and gives the roadmap for improvement according to found gaps in performance implementation. According to gained results suggestions for MEs in transitional countries are:

- It is necessary for MEs to introduce systematic monitoring of operating indicators as part of everyday operations in clearly defined terms and conditions and in particular to take relevant measures after an assessment.
- It is necessary that in developing societies MEs apply significantly more non-financial business indicators than is the case today.
- Enterprises and countries that are not interested in monitoring the indicators of innovation, learning and development, have no chance for success in the global market and one of the main conclusion of this research is that there is a need to spread implementation of performance indicators in the area of innovation and learning in a much larger scale.

Research limitations are connected with number of MEs analysed, analysis of one of two entities in Bosnia and Herzegovina and coverage of MEs from two cities in Serbia. Further research should include analysis in particular business sectors and according to existing models in world best practice and current situation in the field of performance measurement in two transitional countries, pro-

pose performance measurement model to cover gap found in this research. Also it is of interest to spread research on more MEs across Bosnia and Herzegovina and to include enterprises from Former Yugoslav Republic of Macedonia and Montenegro as a non-EU countries in transition and on the other hand developing countries Bulgaria and Romania as EU countries and to compare gained results

References

2CG Active Management. (2013): http://2gc.eu/resource_centre/surveys.

Abdel-Maksoud, A. Dugdale, D. & Luther, R. (2005): Nonfinancial performance measurement in manufacturing companies, in: The British Accounting Review, 37, 261-297.

Adhikari, D.R. (2010): Human resource development for performance management: The case of Nepalese organizations, in: International Journal of Productivity and Performance Management, 59(4), 306-324.

Ahmad, K. & Zabri, S.M. (2016): The Application of non-financial performance measurement in Malaysian manufacturing firms, in: Procedia Economics and Finance, 35, 476-484.

Albino, V., Claudio, G.A. & Schiuma, G. (1999): Knowledge transfer and inter-firm-relationships in industrial districts: the role of the leader firm, in: Technovation, 19, 53–63.

Argote, L. & Ingram, P. (2000): Knowledge transfer: a basis for competitive advantage in firms, in: Organizational Behaviour and Human Decision Processes, 82(1), 150-69.

Barnes, M., Coulton, L., Dickinson, T., Dransfield, S., Field, J., Fisher, N., Saunders, I. & Shaw, D. (1998): A new approach to performance measurement for small and medium enterprises, in: Proceedings of the International Conference on Performance Measurement, Jyly 15-17, Cambridge.

Bititci, U. S., Carrie, A.S., & McDevitt, L. (1997): Integrated Performance Measurement Systems: A Development Guide, in: International Journal of Operations & Production Management, 17 (5), 522–534.

Blackman, T. (2001): Complexity Theory and the New Public Management.": http://www.whb.co.uk/socialissues/tb.htm

Bruyat, C., & Julien, P.A. (2000): Defining the Field of Research in Entrepreneurship, in: Journal of Business Venturing, 16, 165–180.

Burney, L.L. & Widener, S. (2007): Strategic performance measurement systems, job relevant information and managerial behavior responses – Role stress and performance, in: Behavioral Research in Accounting, 19, 43-69.

CIMA. (2009): Management Accounting Tools For Today and Tomorrow: http://www.cimaglobal.com/Documents/Thought_leadership_docs/CIMA%20Tools%20and%20Techniques%2030-11-09%20PDF.pdf

De La Villarmois, O. (2001): Le Concept de Performance et sa Mesure, un e´tat de L'art, Les Cahiers de la Recherche. Avril: Centre Lillois D'analyse et de Recherche sur L'e´volution des Entreprises, Universite´ des sciences et technologies de Lille.

EC Commission. (2014): Annual Report on SMEs 2013/2014 – A Partial and fragile recovery: SME Performance Review 2013/2014. http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review/files/supporting-documents/2014/annual-report-smes-2014_en.pdf.

EC Commission. (2015): User Guide to the SME Definition: http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition/index_en.htm.

Engle, Sr., Dowling, A.D, & Festing, M. (2008): State of origin: research in global performance management, a proposed research domain and emerging implications, in: European Journal of International Management, 2 (2), 153-169.

European Commission (2011): Annual Report on EU Small and Medium sized Enterprises 2010/2011): http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2010-2011/annual-report_en.pdf.

European Commission (2012): Annual Report on EU Small and Medium sized Enterprises 2011/2012): http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2012/annual-report_en.pdf.

European Foundation for Quality Management. (2003): EFQM Model for Business Excellence. EFQM, Brussels.

Forza, C. (2002): Survey research in operations management: a process-based perspective, in: International Journal of Operations & Production Management, 22 (2), 152-194.

Garengo, P., Biazzo, S., & Bititci, U. (2005:. Performance measurement systems in SMEs: a review for a research agenda, in: International Journal of Management Review, 7 (1), 25-47.

Gerschewski, S., Xiao, S. (2014): Beyond financial indicators: An assessment of the measurement of performance for international new ventures, in: International Business Review, 24, 615-629.

Giannopoulos, G., Holt, A., Khansalar E., & Cleanthous, S. (2013): The Use of the Balanced Scorecard in Small Companies, in: International Journal of Business and Management; 8 (14); 1-15.

Government of Serbia (2008): Competitive and Innovative Small and Medium Enterprises. Development Strategy for period 2008-2013: http://www.gs.gov.rs/english/strategije-vs.html.

Hubbard, G. (2009): Measuring Organizational Performance: Beyond the Triple Bottom Line, in: Business Strategy and the Environment, 18 (3), 177–191.

Hvolby, H., & Thorstenson, A. (2000): Performance Measurement in Small and Medium-sized Enterprises, in: Proceedings of SME 2000 Conference, UK, Coventry, April 2000. ISBN 0905949862.

Jankulovic, A. & Skoric, V. (2010): Implementation of performance management system in Serbia, in: EUROMA Conference 2010 Managing Operations in Service Economies. Proceeding of EUROMA 2010.

Jankulovic, A., & Skoric, V (2013): Performance management system implementation in a Southeast European transitional country, in: Journal of East European Management Studies, 18 (2), 173-190.

Kádárová, J., Durkáčová, M., & Kalafusová, L., (2014): Balanced Scorecard as an issue taught in the field of Industrial Engineering, in: Procedia – Social and Behavioral Sciences, 143, 174-179.

Kaplan, R.S. (1983): Measuring manufacturing performance: A new challenge for managerial accounting research, in: The Accounting Review, 58 (4), 686–705.

Kaplan, R. S., & Norton, D. P. (1992): The Balanced Scorecard – Measure That Drive Performance, in: Harvard Business Review, 70(1), 71-79.

Kaplan, R. S., & Norton, D.P. (1996): Using the Balanced Scorecard as a Strategic Management System, in: Harvard Business Review, 74 (1), 75–85.

Kennerley, M. & Neely, A. (2002): A framework of the factors affecting the evolution of performance measurement systems, in: International Journal of Operations and Production Management, 22 (11), 1222-1245.

Kirzner, I. (1997): Entrepreneurial discovery and the competitive market process: An Austrian approach, in: Journal of Economic Literature, 35, 60–85.

Kuwaiti, M.E. (2004): Performance measurement process: definition and ownership, in: International Journal of Operations & Production Management, 24 (1), 55-78.

Lau, C.M. (2011): Nonfinancial and financial performance measures: How do they affect employee role clarity and performance?, in: Advance in accounting, incorporating Advances in International Accounting, 27, 286-293.

Law on Registering Business Subject. (2009): Official Gazette of Republic of Serbia, 11/2009.

Law on Registering Business Subjects in Republic of Srpska. (2009): Official Gazette of Republic of Srpska 118/09.

Lewis, W.G., Pun, K.F., & Lalla, T.R.M. (2006): Empirical investigation of the hard and soft criteria of TQM in ISO 9001 certified small and medium sized enterprises, in: International Journal of Quality & Reliability Management, 23 (8), 964–985.

Meyer, M.W. (2002): Rethinking performance measurement: Beyond the Balanced scorecard: Cambridge, Cambridge University Press.

Marchand, M., and Raymond, L. (2008): Researching Performance Measurement Systems: An Information Systems Perspective, in: International Journal of Operations & Production Management, 28 (7), 663–686.

Minniti, M. (1999): Entrepreneurial activity and economic growth, in: Global Business and Economic Review, 1(1), 31–42.

NARD (2011): National agency for regional development, in: Report on small and medium enterprises and entrepreneurship in 2010: http://narr.gov.rs/index.php/Aktivnosti/Istrazhivanja-i-analize/Izveshtaj-o-MSPP.

NARD (2012): National agency for regional development, in: Report on small and medium enterprises and entrepreneurship in 2011: http://narr.gov.rs/index.php/Aktivnosti/Istrazhivanja-i-analize/Izveshtaj-o-MSPP.

Neely, A. (2005): The evolution of performance measurement research. Development in the last decade and a research agenda for the next, in: International Journal of Operations and Production Management, 25 (12), 1264-1277.

Neely, A. (2005): The evolution of performance measurement research. Developments in the last decade and a research agenda for the next, in: International Journal of Operations & Production Management, 25 (12), 1264-1277.

Neely, A., Adams, C., & Kennerley, M. (2002): The Performance Prism: The Scorecard for Measuring and Managing Business Success, in: Financial Times. London. Prentice Hall.

Neely, A., Gregory, M. & Platts, K. (1995): Performance measurement system design: a literature review and research agenda, in: International Journal of Operations & Production Management, 15 (4), 80-116.

Ng, A., Macbeth, D. & Southern, G. (2014): Entrepreneurial performance of early-stage ventures: dynamic resource management for development and growth, in: International entrepreneurship and Management Journal, 10, 503-521.

Olaru M., Carmen Pirnea I., Hohan I., Maftei M. (2014): Performance indicators used by SMEs in Romania, related to integrated management systems, in: Procedia – Social and Behavioral Sciences 109 (2014) 949 – 953

RARS (2012): Republic Agency for the development of small and medium enterprises of Republic of Srpska. Annual report on small and medium enterprises and artisan-entrepreneurship activities in Republic of Srpska in 2011: http://www.rars-msp.org/sr-Cyrl-BA/publikacije/izvjestaj/.

RARS (2013): Republic Agency for the development of small and medium enterprises of Republic of Srpska. Annual report on small and medium enterprises and artisan-entrepreneurship activities in Republic of Srpska in 2010: http://www.rars-msp.org/sr-Cyrl-BA/publikacije/izvjestaj/.

Raymond, L., Marchand, M., St-Pierre, J., Cadieux, L., & Labelle, F. (2013): Dimensions of small business performance from the owner-manager's perspective: a re-conceptualization and empirical validation, in: Entrepreneurship & Regional Development, 25 (5/6), 468-499.

Rigby, D., & Bilodeau, B. (2011): Management tools and Trends 2011, Bain & Company: http://www.bain.com/Images/BAIN_BRIEF_Management_Tools.pdf.

Rigby, D., Bilodeau, B. (2013): Management Tools & Trends: http://www.bain.com/publications/articles/management-tools-andtrends-2013.aspx.

Schumpeter, J. A. (orig. 1911) (1934/1963): Theorie der wirtschaftlichen Entwicklung, Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus. Translated by R. Opie, in: The theory of economic development, an inquiry into profits, capital, credit, interest, and business cycle. Oxford University Press.

SECONS (2011): Baseline study on women entrepreneurship in Serbia:http://www.secons.net/project.php?Lng=eng&id=20.

Sevic, Z. (2005): Measuring performance on a local government level in a transitional country: the case of Serbia, in: International Journal of Public Sector Management, 18 (7), 582-603.

Steyaert, C., & Katz, J. (2004): Reclaiming the Space of Entrepreneurship in Society: Geographical. Discursive and Social Dimensions, in: Entrepreneurship & Regional Development, 16 (3), 179–196.

Tanas, J. & Audretsch, D. (2011): Entrepreneurship in transitional economy, in: International entrepreneurship and Management Journal, 7, 431-442.

Thaker, K. (2011): How does business performance measurement perform? An empirical study with reference to leading companies in India, in: International Journal of Business Performance Management, 12 (4), 396-416.

Tung, A., Baird, K. & Schoch, P.H. (2011): Factors influencing the effectiveness of performance measurement systems, in: International Journal of Operations & Production Management, 31 (12), 1287-1310.

Van der Stede, W.A., Chow, C.A. & Lin, T.W. (2006): Strategy, choice of performance measures and performance, in: Behavioral Research in Accounting, 18, 185-205.

Venckeviciute, G. & Subaciene, R. (2015): European initiative influence upon Lithuanian SME performance measurement, in: Procedia – Social and Behavioral Sciences, 213, 261-267.

Wiklund, J., Davidsson, P., & Delmar, F. (2003): What do they think and feel about growth? An expectancy-value approach to small business managers attitudes toward growth, in: Entrepreneurship Theory and Practice, 27 (3), 247–270.