



New Trends and Issues Proceedings on Humanities and Social Sciences



Volume 4, Issue 10, (2017) 280-289

www.prosoc.eu

ISSN 2547-8818

Selected Paper of 6th World Conference on Business, Economics and Management (BEM-2017)

04-06 May 2017, Acapulco Hotel and Resort Convention Center, North Cyprus

Innovation and information business processes and their impact on the business performance of industrial companies in Slovakia

Rastislav Rajnoha^{a*}, Faculty of Economics and Business, Pan-European University in Bratislava, Tomasikova 20, 82102 Bratislava, Slovak Republic

Roman Zamecnik^b, Department of Economics and Management, STING ACADEMY College, Stromovka 1, 63700 Brno, Czech Republic

Suggested Citation:

Rajnoha, R. & Zamecnik, R. (2017). Innovation and information business processes and their impact on the business performance of industrial companies in Slovakia. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(10), 280–289. Available from: www.prosoc.eu

Selection and peer review under responsibility of Prof. Dr. Çetin Bektaş, Gaziosmanpasa University, Turkey

©2017 SciencePark Research, Organization & Counseling. All rights reserved.

Abstract

A business entity interested in long-term business, should realise innovations that drive business and are regarded as a tool to maintain competitiveness. A number of studies and research papers show that innovation has a significant role in the social and economic development. This paper focuses on innovation and information processes and their impact on overall business performance of industrial enterprises in Slovakia, mainly from wood-processing, automotive and engineering industries ($N = 164$). The business performance was expressed through Return on equity (ROE). The results point that these industrial companies from Slovakia have a strong focus on the systematic application of innovation procedures and specific business processes. Companies that use technological innovations achieve above average ROE value more than 7% (statistically significant dependence p -value < 0.05 , the alpha level associated with 95% confidence level) and they need a system to formulate how innovation help them to survive and improve their performance.

Keywords: Business process management, innovation, business performance, strategic management, industry.

* ADDRESS FOR CORRESPONDENCE: **Rastislav, Rajnoha**, Faculty of Economics and Business, Pan-European University in Bratislava, Tomasikova 20, 82102 Bratislava, Slovak Republic.

E-mail address: rastislav.rajnoha@paneurouni.com / Tel.: +00421-905-799-196

1. Introduction

The current business environment makes it essential to understand the importance of one of the company's most valuable and volatile intangible assets – 'knowledge'. Knowledge is sometimes considered a fifth factor of production in the current economy and its generation plays a critical role in the firm's competitive advantage and its overall economic performance. Organisations attempt to use knowledge in order to strengthen their competitiveness for both customers and employees (Belas Koraus, Kombo & Koraus, 2016; Singh, Samalia, 2014).

The present business tendencies are expanding worldwide due to three main directions: the globalisation which implies increased international competitiveness, technological changes, organisational behaviour, ICT, knowledge, innovation are considered priorities (Szabo, Soltes & Herman, 2013). The solutions for decision-making support are based on the Integrated Management Information System (IMIS), including specialised business intelligence modules which are aimed to provide support in the decision-making process of the management (Rajnoha, Kadarova, Sujova & Kadar, 2014; Tutunea & Rus, 2012). The commercially available software packages promise seamless integration of all information flows in the company – financial and accounting information, human resource information, supply chain information and customer information (Rajnoha et al., 2014; Tucek, Tuckova & Zamecnik, 2009; Zamecnik & Rajnoha, 2015a). The current time puts high demands on managers, as well as other employees, forcing them to think about how best is to optimize business processes. Improvement and optimisation of production processes impinge on the end boards, and therefore, it is necessary to find the potential for increasing the efficiency of business processes in other businesses. Innovation is a perfect space, because its outputs affect the future of the company and from the perspective of the customer as well as the owners of the company (Chromjakova & Rajnoha, 2009; Stefko, Fedorko & Bacik, 2015). Innovations are important for the customer satisfaction in banking business and for financial performance of commercial bank (Koraus, Stefko & Dobrovic, 2015).

The aim of this paper is to identify the relationship between selected management tools and concepts such as innovations, information systems and others to overall business performance in industrial companies in Slovakia. Based on the research results, we can conclude that the subjected area of research in terms of businesses of Slovak industry is extremely important for enhancing companies' performance. By the application of selected management tools such as innovations, information systems and others, it can be achieved a higher performance of industry companies. More detailed research results are presented in the following sections of this paper.

2. Literature review

Innovation by Chromjakova and Rajnoha (2009) may be a strategic, it may be focused on new product development, and innovative approach to problem solving, innovation can be identified as the process of generating and implementing ideas. Every innovation should contribute to the creation of added value for the customer, but also for the company. The ability to correctly calculate the amount of value-added innovation assumes that the company will be in a systemic approach to the management of innovation and innovation processes in areas such as product innovation, process innovation, technological innovation, organisational innovation, trade innovation, marketing innovation. Innovation is understood as the result of interaction between various economic and social processes (Manley, 2003). Studies published in the last decade showed that innovation is the engine of the growth, being an important element of the development achievements (Szabo, Soltes & Herman, 2013). Innovation activities play an important role in economic growth and can be considered as the engine of economies (Jurickova & Novak, 2015). This study is based on the assumption that the leading economies of the European Union have achieved their leadership in GDP not only on the basis of innovative activities. These activities are influenced by many factors that have mostly synergy

effects and work on process and final product level. The premise is that more factors enter the innovation process and are necessary for successful innovation performance. It is necessary to analyse more factors in detail and complexly and include other factors entering innovation such as investment in research and development, human capital represented by number of researchers, the role of technologies in the twenty-first century, etc., (Jurickova & Novak, 2015).

Innovation is the development of new values through more efficient and effective products and processes. Product innovation focuses on the creation of new products and services or improvement of existing products and services. Process innovation focuses on the implementation of new production or delivery methods, or substantially improved production or delivery methods (Rajnoha & Lorincova, 2015). The development of new products and services through innovation is increasingly seen as an essential tool for sustained organisational performance. This process of renewal through innovation is often referred to as corporate entrepreneurship and organisations are increasing efforts to build capabilities in this area (Covin & Miles, 2007; Hayton & Kelley, 2006; Phan, Wright, Ucbasaran & Tan, 2009; Rajnoha & Lorincova, 2015). In the current period, the innovations play an important role. Successful can only be those businesses that invest their funds into innovation and research. Innovation is known to be one of the keys to an enterprise success. Knowledge creation and dissemination, as well as innovation, are keys to promotion of competitiveness (Cirjevskis, 2016; Tvaronaviciene Zemaitaitiene & Bileviciene, 2016). It is necessary to manage innovation activities in the business. The innovative strategy is the basic tool that determines the innovation direction of the business. Innovation strategy is based on business strategy and strategic goals (Lendel & Varmus, 2011). The experience of many companies and the results of empirical scientific studies point to the fact that small firms are significantly more innovative than large, while being much more flexible on the issue of the speed of the process of innovation. Many innovative products has its origin in small firms. It is directly related to the entrepreneurial workers of small businesses that realise that creativity is key to successful innovation. The benefits of innovations per employee (or from one process innovation) in small firms are 2.5 times higher than in large firms. It corresponds to the fact that the degree of innovation, quantified as a percentage of revenues achieved is 40% higher for small firms (under 50 employees) compared to the large firms. The average return on innovation, converted to staff of development departments and its created value added innovation in small firms is at 12.4%, while that of large firms is only 1.6% (Chromjakova & Rajnoha, 2009).

The term 'Business Performance Measurement and Management' means the creation and use of usually several indicators of various dimensions (e.g., cost, time, quality, innovation capacity, customer satisfaction), which are used to assess effectiveness and efficiency of the performance and performance potentials of different objects in the enterprise (Zamecnik & Rajnoha, 2015b). Based on our critical literature review, we identified the following most frequently used methods and performance management and measurement tools (Neely, 2007; Neely, Adams & Kennerley, 2002; Rajnoha & Dobrovic, 2011; Tangen, 2004; Wulf & Hoboken, 2006; Young & O'Byrne, 2001; Zamecnik & Rajnoha, 2015b; Zamecnik & Vystupova, 2012):

- Management accounting (based on the traditional absorption costing and alternative variable costing),
- Process management accounting method (including the concepts of ABM, ABC, ABB),
- Controlling,
- Classical financial performance indicators (especially indicators of the absolute value of earnings, cash flow and profitability indicators),
- Balanced scorecard (BSC),
- Total quality management (including the concepts of European Foundation for quality management, Malcolm Baldrige National Quality Award, Six Sigma, benchmarking),
- Value-based management,
- Theory of constraints,
- Business process reengineering,
- Lean Production (including JIT and Kanban concepts).

The achievements of our scientific research show the overall conclusion that companies from selected Slovak industries which reach above average performance are strongly focused on managing its strategic performance while applying many modern indicators, concepts, models and methods of its management (Rajnoha, Stefko, Merkova. & Dobrovic, 2016; Zamecnik & Rajnoha, 2015a). Statistically significant dependence of business performance, expressed through the indicator Return on Equity (ROE) for the selected parameters of strategic management performance was demonstrated in the application of the following methods, concepts and tools for managing of business performance:

- Organisational structure,
- Outcomes of managerial accounting,
- Strategic planning and controlling,
- Business information system – ERP,
- Management information system – MIS,
- Business intelligence information system – BI,
- Key performance indicators – KPI,
- Balanced scorecard – BSC.

The need to establish links between planning, decision, action and results has generated substantial interest in the measurement of organisational performance as a performance and a notion that permeates contemporary societies, as it is used to assess the quality of individual and collective efforts (Micheli & Mari, 2014). Performance measurement and management systems are called strategic expert systems through which organisations observe and measure their intangible elements of performance, both in the form of qualitative and quantitative assessments. While using these systems, organisations intend to monitor internal and external opportunities and threats resulting from, and in intangible resources in strategic processes. The performance measurement and management literature have considered different impacts of the assessment and measurement of intangible resources in organisations (Fried, 2010). Several studies investigate the level of knowledge and use of different performance management tools in Slovenia, Czech Republic, Poland and Slovakia with a particular focus on modern methods (Paladi & Fenies, 2016).

3. Research objectives and methodology

This paper sets out to present selected results and outcomes of research study oriented on the mapping of the current situation in the field of business performance management in Slovak industry enterprises. Our research study was oriented on the following basic question: What non-financial strategic tools do you use in your business to measure and manage corporate performance?

- Number of new products
- Number of new innovation processes
- Number of new markets
- Number of new customers
- Number of new product innovation
- Technological innovation
- Focus on environment

The main goal of our research was to analyse the utilisation rate of non-financial indicators, methods and models of an enterprise performance. This was done on the sample of randomly chosen enterprises and organisations in various industrial branches mainly from the wood-processing, automotive and engineering industries of Slovak Republic. Based on the relevant mathematical and statistical methods, we are to causally identify subsequent connections and then, determine their impact on an enterprise performance reached.

For the purpose of research, also due to the goals set, we decided to collect the data and information needed through an extensive on-line research questionnaire. In total, more than 1,500 enterprises and organisations were addressed via e-mail or phone communication, and above all by means of a directive interview. In the end, 164 enterprises and organisations filled in the questionnaires that were subsequently examined. We consider the research sample of 164 enterprises and organisations relevant with having a sufficient indicator value.

The following Table 1 presents basic information about the statistical research files.

Table 1. Basic data sets analyzed

File	Sector, focus	Frequency
File 1	All examined sectors	164 companies
File 2	Wood processing industry	34 companies
File 3	Engineering industry	30 companies
File 4	Automotive industry	16 companies
File 5	Selected industries (wood processing industry, engineering industry, automotive industry)	80 companies
File 6	Manufacturing companies	106 companies
File 7	Trade and service companies	58 companies

We used relevant mathematical and statistical methods to identify and determine their impact on achievable performance businesses. Data from questionnaire were processed and evaluated by chosen statistical methods, we applied Chi-squared test, which is commonly used for testing the independence between two categorical variables. Association between variables is examined with contingency coefficients and contingency tables. Results of Chi-squared tests describe selected statistics: Pearson’s Chi-square and significance p -value ‘ p ’, Maximum-Likelihood Chi-square and p -value, Pearson’s contingency coefficient (CC), adjusted contingency coefficient (Adj. CC) and degrees of freedom (df). A real dependence between variables was tested by using the Chi-square values. If the value of Chi-square corresponds to the probability $p > 0.05$, the relationship between variables is not statistically significant and it is not meaningful to count contingency coefficient or analyse the residuals in contingency tables. In the case of $p \leq 0.05$, we can characterise the ‘strength’ or ‘tightness’ of relationship between two variables by the appropriate coefficient.

The business performance expressed through ROE was basic sorting parameter. Companies were initially analysed on the basis of distribution according to performance achievement within 6 performance groups – categories (group from 0 to 5; group 0 – the worst performance with negative ROE, group 1 – ROE 0–2%, group 2 – ROE 2–4%, group 3 – ROE 4–7%, group 4 –ROE 7–10%, group 5 – the best performance with ROE above 10%). Sufficient number of scales (6) in our subsequent mathematical and statistical research will allow the variability of classifying businesses into different performance categories, as it required the application of mathematical and statistical methods. In the case of low frequencies, we narrowed the six performance categories for the following three performance categories of companies: inefficient companies (negative value of ROE < 0, positive value of ROE from 0% to 2%), companies reaching average performance (positive value of ROE from 2% to 4%, positive value of ROE from 4% to 7%), high performance companies (positive value of ROE from 7% to 10%, positive value of ROE over 10%).

We formulated the basic (null) hypothesis H_0 , H_1 alternative hypothesis and the significance level α for testing statistical hypotheses. The aim was to try to challenge the hypothesis H_0 . Alternative hypothesis H_1 amounted contrary to the basic hypothesis. Acceptation of a decision on, respectively, rejecting H_0 , we conducted based on:

- $\alpha < p$ H_0 not rejected,
- $\alpha \geq p$ H_0 rejected in favor of H_1 .

Null hypothesis – H0: There is no relationship between selected variables and business performance.

Alternative hypothesis – H1: There is a relationship between selected variables and business performance.

The significance level $\alpha = 0.05$.

The research results obtained by the application of selected methods of mathematical-statistical system are presented in the next part of the paper.

4. Results and discussion

We analysed selected parameters of descriptive statistics – observed absolute and relative frequency of different categories of strategic parameters differentiated by performance groups. Achieved frequencies in all enterprises ($N = 164$) are presented in the following tables and text. We were interested in the impact of selected non-financial indicators and methods applied in companies on their overall business performance. In presenting results, we focused on statistically significant dependence (p -value < 0.05 , which is the alpha level associated with a 95% confidence level). We present the results of statistics and contingency tables. Just from the results of residuals, we can demonstrate relevant, scientifically based findings and to state certain logical conclusions presented below.

The achieved results of our research shows that industry companies in Slovakia which have a higher performance, are strongly focus on strategic performance management while apply many modern concepts and methods of its management. We focused on whether the firms engaged in innovation, since innovation is a process, not an event or action, and therefore must be controlled. They need a system that will formulate how innovation can help them survive. From the research, it shows that companies reaching higher performance, focus to strategic indicators as technological innovations and environment.

The strategic non-financial indicator of technological innovation had statistically significant impact on the level of business performance of ROE (Table 2), where the comparison of frequencies (Table 3) we can say that businesses in the use of the technological innovations achieve above average ROE value more than 7% (Group 3).

Table 2. Contingency: technological innovations x performance – statistics - all examined sectors (source: own)

Statistics	Chi-square	df	p
Pearson's Chi-square	7.736977	df = 2	$p = 0.02089$
M-L Chi-square (CC)	6.699093	df = 2	$p = 0.03510$
Adj. CC	0.2122530		
	0.2172020		

Table 3. Contingency: technological innovations x performance – frequencies - all examined sectors (source: own)

Technological Innovations	Group 1: Low performance (ROE < 0, 0–2%)	Group 2: Medium performance (ROE 2–4%, 4–7%)	Group 3: High performance (ROE 7–10%, above 10%)	Row total
Observed frequencies				
Do not use	63	54	21	138
Use of technological innovation	9	7	10	26
Total	72	61	31	164
Expected frequencies				

Do not use	60.58537	51.32927	26.08537	138.0000
Use of technological innovation	11.41463	9.67073	4.91463	26.0000
Total	72.00000	61.00000	31.00000	164.0000
Residual frequencies				
Do not use	2.41463	2.67073	-5.08537	0.00
Use of technological innovation	-2.41463	-2.67073	5.08537	0.00
Total	0.00000	0.00000	0.00000	0.00

ROE differentiated only into 2 performance groups showed two strategic non-financial indicators. Besides technological innovation, the second statistically significant indicator is the environmental orientation (Table 4), in which the typical achieve better business performance with ROE value more than 4% (Table 5).

Table 4. Contingency: focus on environment x performance – statistics - all examined sectors (source: own)

Statistics	Chi-square	df	p
Pearson's Chi-square	5.073809	df = 1	p = 0.02429
M-L Chi-square	4.815006	df = 1	p = 0.02821
CC	0.1758916		
Adj. CC	0.1732323		

Table 5. Contingency: focus on environment x performance – frequencies – all examined sectors (source: own)

Focus on environment	Group 1 (ROE < 0, 0–2%, 2–4%)	Group 2 (ROE 4–7%, 7–10%, above 10%)	Row total
Observed frequencies			
Do not focus	99	46	145
Focus on environment	8	11	19
Total	107	57	164
Expected frequencies			
Do not focus	94.6037	50.39634	145.0000
Focus on environment	12.3963	6.60366	19.0000
Total	107.0000	57.00000	164.0000
Residual frequencies			
Do not focus	4.39634	-4.39634	0.00
Focus on environment	-4.39634	4.39634	0.00
Total	0.00000	0.00000	0.00

In the manufacturing companies – File 6 ($N = 106$) the non-financial indicator of technological innovation had statistically significant impact on the level of business performance of ROE (Table 6), where the comparison of frequencies (Table 7) we can say that businesses in the use of the technological innovations achieve above average ROE value more than 7% (Group 3). In the File 7 – Trade and service companies ($N = 58$) the non-financial indicator of technological innovation did not have statistically significant impact on the level of business performance of ROE.

Table 6. Contingency: technological innovations x performance – statistics – manufacturing companies (source: own)

Statistics	Chi-square	df	p
Pearson's Chi-square	8.643223	df = 2	p = 0.01328
M-L Chi-square	7.746588	df = 2	p = 0.02079
CC	0.2745767		
Adj. CC	0.2855518		

Table 7. Contingency: technological innovations x performance – frequencies - manufacturing companies (source: own)

Technological Innovations	Group 1: Low performance (ROE < 0, 0–2%)	Group 2: Medium performance (ROE 2–4%, 4–7%)	Group 3: High performance (ROE 7–10%, above 10%)	Row total
Observed frequencies				
Do not use	40	30	10	80
Use of technological innovation	9	7	10	26
Total	49	37	20	106
Expected frequencies				
Do not use	36.98113	27.92453	15.09434	80.0000
Use of technological innovation	12.01887	9.07547	4.90566	26.0000
Total	49.00000	37.00000	20.00000	106.0000
Residual frequencies				
Do not use	3.01887	2.07547	-5.09434	0.00
Use of technological innovation	-3.01887	-2.07547	5.09434	0.00
Total	0.00000	0.00000	0.00000	0.00

5. Conclusion

To maintain competitiveness and improving the business performance, it is essential that companies has to challenge of strategic performance management system and innovation processes. Based on our research, we have shown that an important tool to improve the overall business performance also in conditions of Slovak industry seems to be the technological innovations. The strategic non-financial indicator of technological innovation had statistically significant impact on the level of business performance of ROE. Industry companies in Slovakia, they use a technological innovations to achieve above average ROE value more than 7%. They need a system that will formulate how innovation can help them survive and to improve their performance. From the research it shows that companies reaching higher performance, focus on strategic indicators as technological innovations and environment. We believe that our study presented in this paper contributes to explore a new dimension to the existing view on innovation processes in industrial companies. Therefore, we continue in our research to bring more relevant results.

Acknowledgements

This paper is the partial result of the GAAA - Grantova agentura Akademické aliance Grant project Nr. GAAA 3_2/2016 – ‘Strategic business performance measurement and management and its comparison in Czech and Slovak companies’. The authors are thankful to the GAAA for financial support for this research.

The authors are thankful to the research project analysis of the ACADEMY STING College named IGA_AS_01_05/2 'Human Resources Controlling', which provided financial support for this research.

References

- Belas, J., Koraus, M., Kombo, F. & Koraus, A. (2016). Electronic banking security and customer satisfaction and in commercial banks. *Journal of Security and Sustainability Issues*, 5, 411–422.
- Chromjakova, F. & Rajnoha, R. (2009). Economy of innovation as a part of the increase of the company performance. *Journal of Competitiveness*, 1, 66–74.
- Cirjevskis, A. (2016). Sustainability in information and communication technologies' industry: innovative ambidexterity and dynamic capabilities perspectives. *Journal of Security and Sustainability Issues*, 6, 211–226.
- Covin, J. G. & Miles, M. P. (2007). Strategic use of corporate venturing. *Entrepreneurship: Theory & Practice*, 31, 183–207.
- Fried, A. (2010). Performance measurement systems and their relation to strategic learning: a case study in a software-developing organisation. *Critical Perspectives on Accounting*, 21, 118–133.
- Hayton, J. C. & Kelley, D. J. (2006). A competency-based framework for promoting corporate entrepreneurship. *Human Resource Management*, 45, 407–427.
- Jurickova, E. & Novak, P. (2015). Trends in innovation performance of leading economies in the European Union. *Economics Management Innovation*, 7, 3–18.
- Koraus, A., Stefko, R. & Dobrovic, J. (2015). *Acquisition Activity in Financial Sector*. 12th International Scientific Conference on European Financial Systems 2015 (pp. 277–286). Brno, Czech Republic: Masarykova univerzita.
- Lendel, V. & Varmus, M. (2011). Identification of the main problems of implementing the innovation strategy in Slovak businesses. *Acta universitatis agriculturae et silviculturae mendelianae brunensis*, 4, 221–234.
- Manley, K. (2003). Frameworks for understanding interactive innovation processes. *International Journal of Entrepreneurship and Innovation*, 4, 25–36.
- Micheli, P. & Mari, L. (2014). The theory and practice of performance measurement. *Management Accounting Research*, 25, 147–156.
- Neely, A., Adams, C. & Kennerley, M. (2002). *The performance prism: the scorecard for measuring and managing business success*. London, UK: Prentice Hall.
- Neely, A. D. (2007). *Business performance measurement, unifying theories and integrating practice* (2nd ed.). Cambridge, UK: Cambridge University Press.
- Paladi, I. & Fenies, P. (2016). *Performance management in Central and Eastern European countries: a literature review*. In *Performance measurement and management control: contemporary issues* (pp. 215–271). Bingley, UK: Emerald Group Publishing.
- Phan, P. H., Wright, M., Ucbasaran, D. & Tan, W. L. (2009). Corporate entrepreneurship: current research and future directions. *Journal of Business Venturing*, 24, 197–205.
- Rajnoha, R. & Dobrovic, J. (2011). Simultanne riadenie ekonomiky a procesov znalosťou pridanej hodnoty. *E + M Ekonomie a Management*, 14, 53–69.
- Rajnoha, R., Kadarova, J., Sujova, A. & Kadar, G. (2014). Business information systems: research study and methodological proposals for ERP implementation process improvement. *Procedia - Social and Behavioral Sciences Journal*, 109, 165–170.
- Rajnoha, R. & Lorincova, S. (2015). Strategic management of business performance based on innovations and information support in specific conditions of slovakia. *Journal of Competitiveness*, 7, 3–21.
- Rajnoha, R., Stefko, R., Merkova, M. & Dobrovic, J. (2016). Business intelligence as a key information and knowledge tool for strategic business performance. *E + M Ekonomie a Management*, 19, 183–203.
- Singh, H. & Samalia, H. (2014). A business intelligence perspective for churn management. *Procedia – Social and Behavioral Sciences*, 109, 51–56.
- Stefko, R., Fedorko, R. & Bacik, R. (2015). The role of E-marketing tools in constructing the image of a higher education institution. *Procedia-Social and Behavioral Sciences*, 175, 431–438.

Rajnoha, R. & Zamecnik, R. (2017). Innovation and information business processes and their impact on the business performance of industrial companies in Slovakia. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(10), 280–289. Available from: www.prosoc.eu

Szabo, Z., Soltes, M. & Herman, E. (2013). Innovative capacity & performance of transition economies: comparative study at the level of enterprises. *E + M Ekonomie a Management*, 16, 52–68.

Tangen, S. (2004). Professional practice: performance measurement from philosophy to practice. *International Journal of Productivity and Performance Management*, 53, 726–737.

Tucek, D., Tuckova, Z. & Zamecnik, R. (2009). Business process management with software support. In K. S. Soliman (Ed.), *Knowledge management and innovation in advancing economies-analyses & solutions* (vol.1–3, pp. 1060–1073). Norristown, Pennsylvania: International Business Information Management Association.

Tutunea, M. & Rus, R. (2012). Business Intelligence solutions for SME's. *Procedia Economics and Finance*, 3, 865–870.

Tvaronaviene, A., Zemaitaitiene, G. & Bileviciene, T. (2016). Ecosystem for sustainable entrepreneurship: towards smart public procurement review procedures. *Entrepreneurship and Sustainability Issues*, 4, 39–52.

Wulf, C. C. & Hoboken, N. J. (2006). *CFO insights: enabling high performance through leading practices for finance ERP* (p. 290). Hoboken, NJ: John Wiley & Sons.

Young, S. D & O'Byrne, S. F. (2001). *EVA and value-based management: a practical guide to implementation*. New York, NY: McGraw Hill.

Zamecnik, R. & Rajnoha, R. (2015a). *Strategic business performance management on the base of controlling and managerial information support*. In 4th World Conference On Business, Economics And Management (vol. 26, pp. 769–776). Amsterdam, Netherlands: Elsevier.

Zamecnik, R & Rajnoha, R. (2015b). *Business process performance measurement under conditions of business practice*. In 4th World Conference On Business, Economics And Management (vol. 26, pp. 742–749). Amsterdam, Netherlands: Elsevier.

Zamecnik, R. & Vystupova, L. (2012). *Research on performance measurement under conditions of Czech enterprises*. In 7th International Conference On Accounting And Management Information Systems (AMIS) (pp. 1353–1367).