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Strategic Business Performance Management System in Wood Processing Industry in Slovakia

Sustav upravljanja strateškim poslovanjem u drvoprerađivačkoj industriji Slovačke

ABSTRACT • *Measuring and managing of business performance is a complex and difficult process, which at the present time passes through significant changes in theory and practice. Previously used indicators, methods and models were mainly based on financial indicators and methods of financial management. The problem of proving and relatively accurately quantifying the impact of financial indicators for the overall business performance in theory and practice of management has been fairly well solved. However, to identify and quantify the impact of qualitative non-financial indicators and methods of the management on the overall performance has so far been an issue that requires further scientific research in specific conditions of Slovak wood-processing industry. Based on statistical results of our research, wood processing industry enterprises should apply the selected methods and models of strategic business performance management. By applying the selected strategic methods and models, such as Balanced Scorecard, Business Intelligence, strategic planning and controlling, innovations and others, wood processing companies in Slovakia will achieve a better performance.*

Key words: *business performance, strategic performance management system, financial indicators, wood-processing industry, Slovakia*

SAŽETAK • *Mjerenje i vođenje poslovanja složen je i težak proces koji u ovome trenutku u teoriji i korporativnoj praksi doživljava velike promjene. Prethodno korišteni indikatori, metode i modeli uglavnom su se temeljili na financijskim pokazateljima i metodama financijskog upravljanja. Isticanje i relativno precizno kvantificiranje utjecaja financijskih pokazatelja na ukupnost poslovanja u teoriji i praksi upravljanja prilično je dobro riješeno. Međutim, identificirati i kvantificirati utjecaj kvalitativnih nefinancijskih pokazatelja i načina upravljanja njima na ukupnu učinkovitost čini se da je pitanje koje zaslužuje adekvatan prostor u znanstvenim istraživanjima u određenim uvjetima slovačke drvoprerađivačke industrije. Na temelju statističkih rezultata našeg istraživanja, poduzećima drvne industrije preporučujemo da primijene odabrane metode i modele upravljanja strateškim poslovanjem. Aplikacijom odabranih strateških metoda i modela kao što su sustav uravnoteženih ciljeva - Balanced*

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Scorecard, informacijski sustav Business Intelligence, strateško planiranje i kontroling, inovacije i dr., mogli bi se postići bolji rezultati poslovanja drvoprerađivačkih poduzeća u Slovačkoj.

Ključne riječi: *poslovni rezultati, sustav upravljanja strateškim poslovanjem, financijski pokazatelji, drvoprerađivačka industrija, Slovačka*

1 INTRODUCTION
1. UVOD

The world of business environment in modern economies and cities has changed dramatically the way of pursuing business and nowadays heavily depends on the performance in generating and utilizing new knowledge, imagination, creativity, innovations and technologies (Kourtit, 2011). In order to stay competitive, firms measure, monitor, and analyze their performance. Performance management systems are regularly implemented as balanced and dynamic solutions requiring considerable human (Kropivsek *et al.*, 2011) and financial resources, and offering support to the decision-making process by gathering, elaborating, and analyzing information (Vukšic, 2013). Calculation based on performed activities and processes – so called Activity-Based Costing (ABC) is becoming an important tool for the costs performance management (Rajnoha and Chromjaková, 2009). Besides implementing the ABC model, it is very important to integrate into this process of continuous improvement of enterprise efficiency the value added measures by single processes through process identification, which do not bring the added value in the whole production process (Rajnoha and Dobrovič, 2011). By the application of the new management IS, it will be possible to provide many market opportunities (Aláč *et al.*, 2010).

Strategic Performance Measurement Systems (SPMS) are used in a wide number of organizations to support performance planning, measurement and control. SPMS are designed to present managers with financial and nonfinancial measures covering different perspectives which, in combination, provide a way of translating strategy into a coherent set of performance measures (Chenhall, 2005). SPMS typically provide information on financial and nonfinancial performance measures (Oblak and Zadnik Stirn, 2000) in an effort to both report on past performance and help managers influence future performance. Financial measures assess the short-term impact of managerial decisions in areas such as revenue growth, asset utilization, and cash flows (Kaplan, 2001; Rappaport, 2005), while nonfinancial measures capture variables that are likely to influence future financial performance, such as customer service and quality products. SPMS are expected to help organizations achieve and maintain strategic alignment in their decisions, resource allocations and activities, in order to obtain results and increase shareholder value both in times of stability and during times of change in strategic direction (Bento, 2014). Strategic investment decision-makings should be regarded in each business entity as the crucial factor for its long-term prosperity. An acquired decision affects the performance of the company as well as its competitiveness in long time (Merková *et al.*, 2013). The Balanced Scorecard (Kaplan, 1992) was first proposed by Kaplan and Norton and it is the most popular form of SPMS.

Initial studies in performance measurement tested the impact of certain performance measures on actual financial performance in particular industries (Banker, 2000). Over the past decade, studies focused on the performance effects of specific SPMS characteristics such as the use of more subjective nonfinancial measures (Ittner, 2003) and the actual performance impact of overall SPMS adoption (Burney, 2007). Van der Stede *et al.*, (2006) provided intriguing evidence of the importance of including a diverse set of performance measures in the SPMS, finding that companies that used a higher number of performance measures actually achieved better performance. Apart from individual value system for each employee, it is also necessary to respect the value system of the whole organization. Consequently, it is necessary to elaborate the concept of business value management and to utilize the system of Balanced Scorecard - BSC (Hitka and Rajnoha, 2003). Production results highly depend on motivation factors, so this kind of research is necessary if wood processing and furniture manufacturing companies want to increase the production results and competitive strength in the international market (Jelačić *et al.*, 2008). On the other hand, Kaplan and Norton (2008) provided anecdotal evidence that breakdowns in the SPMS actually lead to deteriorating company performance. More recently, Bisbe and Malagueño (2012) found evidence that the effect of SPMS on organizational performance is reduced in situations where environmental dynamism is high. Petter *et al.*, (2012) argued that information system success leads to improved company performance, while others have concluded that there is no relationship between information systems and performance measurement (Soudani, 2012).

According to the management control literature, the uses for which the SMPS are designed may have a significant influence in their outcomes (Chenhall, 2005) and Mouritsen (2005) has pointed out that the ability of management control systems to support change is influenced by system design. Ittner (2001) argued that SPMS research should examine the decision purposes for which a SPMS is designed, in order to allow appropriate interpretation of the outcomes of the use of performance measures, given that they might be appropriate for some purposes but not for others.

According to Bento (2014), the literature of performance measurement shows that SPMS can have a significant impact on business results. Their study expands on the performance management literature by integrating variables from three disciplinary areas: information systems, accounting and management to

provide an interdisciplinary approach to performance management research. Results show that IT variables, combined with system variables and organizational variables, have a significant relationship with the SPMS impact on business results across industries, geographical locations and organizational sizes.

Several other empirical studies conducted in recent years in the world have confirmed the relationship between strategic planning and achieved business performance (Rudd, 2008). On that basis, we can conclude that strategic planning has a positive impact on business performance regardless of the sector in which it operates (Andersen, 2000). Some Spanish authors made some interesting empirical studies and recently they have analyzed SPMS and its impact on business performance in terms of strategic planning and strategic decision-making. Using a combination of archival data and the questionnaires received from 267 medium and large companies in Spain, evidence was provided of a positive relationship and dependence between SPMS and business performance in a highly dynamic environment (Bisbe and Malagueňo, 2012). Similar research conducted in Spain also focused on the relation between the use of SPMS and the quality of the strategic planning process. Empirical data were obtained from surveys of 349 medium and large Spanish companies and their evaluation confirmed the positive relationship between the use and dependence between SPMS and quality of strategic plans and company decisions (Gimbert, 2010). Most authors state in their scientific studies that SPMS can help business to define and achieve its strategic objectives, align behaviors and attitudes, and ultimately to have a positive impact on business performance. However, SPMS can also be criticized for a number of reasons, such as the promotion of inappropriate behavior of managers, suppression of innovation and learning, and so on (Micheli and Manzoni, 2010). Another important research in this area has focused on exploring the strategic planning process and its links to business performance in a highly turbulent and unstable environment. The authors emphasize that strategic planning has the potential to produce positive effects on business performance in a highly unstable environment and that planning is an important value added for the company in terms of its higher performance (Brews and Purohit, 2007). Based on these studies, it can be concluded that regular use of the SPMS in a company may favor the more comprehensive and elaborate system of strategic planning, which is further reflected in higher business performance. It should also be noted that strategic planning is an integral part of SPMS.

In a long run, our research deals with the issue of increasing the potential of the renewable natural resources industry and increasing its efficiency and competitiveness through the specific methodology of industry performance measurement and management within the specific conditions of the wood-processing industry in the Slovak Republic. Based on our previous research, the global performance of wood-processing industry in Slovakia measured by various indicators appears positive in recent years (Merková *et al.*, 2012). Then we posed some other research questions: Why is this happening? What strategic factors influence better performance of some wood-processing companies? Selected research results and answers to these research questions are presented further below.

2 MATERIALS AND METHODS
2. MATERIJALI I METODE

If the company can reduce its overall costs while maintaining the total revenues, it will have a positive impact on the achieved profit. If the company can ensure the inflow of new customers, it might expect higher total revenues and possibly higher overall profits. If the company invests funds into the quality management system, it could achieve higher quality, and under certain circumstances, it could bring higher sales and better market position. If the company invests in training its employees, then the company could achieve a higher level of knowledge, and it would help to generate better performance indicators in the longer term. Maximum degree of certainty of achieving the expected results, through various levels of probability, to the limits of the maximum uncertainty with different targets, indicators, and management actions, may or may not venture to bring greater efficiency. Obviously this research area is not clearly determined. It should be mentioned that our present business environment is far from showing a high degree of stability and certainty, as experienced in the past. A major research hypothesis has been expressed, according to which many non-financial, strategic or qualitative indicators and methods applied in management have an impact on the overall business performance, which can be measured despite the complexity of the issue to determine the relevant ones. Based on this assumption, the main objective was set. We decided to verify this claim, and bring up new and so far insufficiently verified knowledge in the field of business performance management.

The main objective of our research was to analyze the utilization rate of traditional and modern indicators, methods and models of Strategic Business Performance Management on a sample of randomly selected companies in different industries of the Slovak Republic with a primary focus on the wood processing industry, and to identify on the basis of relevant mathematical and statistical methods causal relation-follow links and determine their impact on achievable business performance.

The analyzed parameters were measurement and management of strategic business performance. They were selected by statistical methods and determined by their effect on the overall business performance evaluated on the basis of ROE (Return on Equity in %). The following five hypotheses were defined for the research in the field of Strategic Business Performance Management:

H 1: It is assumed that business performance will be affected by the type of organizational structure. Increased performance will be present in com-

panies with a matrix, project or network structure. The traditional functionally oriented organizational structure will be typical for the companies with lowest performance.

H 2: It is assumed that, if companies use some strategic management tools and systems to support strategic performance management, they will achieve higher performance. Higher performance will also be achieved in enterprises applying long-term strategic business planning and controlling.

H 3: Another hypothesis is the strategic business performance management methodology BSC (Balanced Scorecard). We believe that, if the BSC methodology is not introduced in the company or if it is only partially used (only irregular reporting of selected indicators), business performance is lower. If the BSC methodology is used comprehensively, systematically and regularly, it will improve the efficiency of the company.

H 4: This hypothesis focused on the Information support to strategic business performance management. The implementation of MIS (Management Information System) or BI (Business Intelligence) Information Systems will improve the efficiency of the company compared to companies that do not consider introducing this type of information system.

H 5: The duration of use of strategy parameters is important for the best performance. We expect that the tools, methods and concepts can have an impact on higher performance if they are used for more than 2 years.

The impact of strategic parameters was examined in companies divided into 7 files. They differed by surveyed sectors and by activities of the company. The initial group consisted of all surveyed industries (164 companies), from which the samples were created separately targeted at companies of wood processing industry, engineering industry and automotive industry.

A file was created of companies from all the three industries. The final two sets were based on the main activity (focus) and manufacturing companies, while the last set consisted of trade and service companies. Table 1 presents the basic information about the statistical research files.

Business performance expressed through ROE was the basic sorting parameter. Companies were initially analyzed on the basis of distribution according to performance achievements within 6 performance groups – categories (group from 0 to 5; group 0 – the worst performance with negative ROE, group 5 – the best performance with ROE above 10 %). In the current state of knowledge, we realize that ROE is not the best indicator and that it would be better to use, for example, the EVA (Economic Value Added) indicator. To determine this indicator, each company needs to know the cost of capital and to provide an exact value for the purposes of research, which seemed impossible to get. The following disaggregated range was used in each researched company to determine the actual size of the ROE:

- negative value /ROE < 0/,
- positive value - from 0 % to 2 %,
- positive value - from 2 % to 4 %,
- positive value - from 4 % to 7 %,
- positive value - from 7 % to 10 %,
- positive value - above 10 %.

The scale was used rather than a particular value of ROE because of the sensitivity of the issue. 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 %) –EVA will probably be negative.
- Companies reaching average performance (positive value of ROE - from 2 % to 4 %, positive value of ROE - from 4 % to 7 %) –Eva probably +/- 0 or slightly positive value.

Table 1 Analyzed data sets
Tablica 1. Osnovna skupina analiziranih podataka

File / *Skupina*	**Sector, focus** / *Sektor, područje djelovanja*	**Frequency** *Učestalost*
File 1 / *Skupina 1.*	All examined sectors / *svi promatrani sektori*	164 companies *164 poduzeća*
File 2 / *Skupina 2.*	Wood processing industry /*drvoprerađivačka industrija*	34 companies *34 poduzeća*
File 3 / *Skupina 3.*	Engineering industry / *strojarska industrija*	30 companies *30 poduzeća*
File 4 / *Skupina 4.*	Automotive industry / *autoindustrija*	16 companies *16 poduzeća*
File 5 / *Skupina 5.*	Selected industries (Wood processing industry, Engineering industry, Automotive industry) / *odabrane industrije (drvoprerađivačka, strojarska, autoindustrija)*	80 companies *80 poduzeća*
File 6 / *Skupina 6.*	Manufacturing companies / *proizvodna poduzeća*	106 companies *106 poduzeća*
File 7 / *Skupina 7.*	Trade and service companies / *trgovačka i uslužna poduzeća*	58 companies *58 poduzeća*

- Powerful companies (positive value of ROE - from 7 % to 10 %, positive value of ROE - over 10 %) – EVA will probably be relatively high positive.

Strategic parameters have been studied mainly as nominal variables. For this reason, for the statistical analysis of the impact of strategic parameters on the business performance, we have applied pivot tables and pivot coefficients, which were recommended by scientific literature. In these tests, we have divided the observed companies into categories, and then we compared the observed and theoretical frequency in these categories. Viewed statistics were Pearson's chi-square and the level of statistical significance "p", M-V chi-square and value of "p", Pearson Contingency coefficient, Contingency coefficient corrected, Phi coefficient for 2 x 2 tables and Cramer's V for more members graded categories.

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. The alternative hypothesis H_1 was contrary to the basic hypothesis. Decision on rejecting H_0 was carried out based on:

- α < p H_0 not rejected,
- α ≥ p H_0 rejected in favor of H_1.

Null hypothesis - H_0: There is no relationship between strategic parameters and business performance.

Alternative hypothesis - H_1: There is a relationship between strategic parameters and business performance.

Significance level α = 0.05.

The resulting response based on the total number of 164 surveyed companies was scientifically prepared, and the research results were obtained by applying the selected methods of descriptive statistics, shown in more detail in the next section with a specific focus on the wood industry (34 surveyed companies).

3 RESULTS AND DISCUSSION
3. REZULTATI I RASPRAVA

The results of chi-square statistical tests recorded a value of $p < 0.05$ in a file of companies of wood processing industry as follows:

- By applying management tools and systems to support performance management "long-term strategic

planning and systematic creation of company-wide business strategies and sub-strategies", companies have achieved average and above-average performance (groups 2-5).

- The methods used in the context of business planning and controlling "Incomplete calculation of variable costs based on contributions cover", is only typical for companies with average performance (ROE 2-7 %), and "Modern ABC method", is typical for the highest performance group 4 and 5, and over 7 % of the ROE.

- Other non-financial strategic indicators and tools "The number of complaints and customer satisfaction" indicator affect the average and above-average performance of a group and "Technological Innovation"; by applying this indicator companies reach ROE over 4 %.

In these analyses, the assumptions were not satisfied about the minimum frequency in cells of contingency tables by differentiating ROE to the 6 original groups, or the gradual merging of three and two performance groups. There is enough evidence to unequivocally state that the strategic tools presented significantly affect business performance.

Statistically significant dependence has not been proven in further analysis of the relationship between strategic parameters and business performance in the wood processing industry according to the results of chi-square tests with p-value > 0.05. It was not appropriate to investigate contingent factors or levels of residues.

From further characteristics of wood processing industry, several strategic parameters were selected, and they are presented in Table 2 to Table 5 and in Figures 1 and 2.

Considering the type of organizational structure, it follows that wood processing companies use the traditional function-oriented organizational structure to the greatest extent (68 % of companies), and the most numerous group in terms of performance is 0-2. This may be affected by the overall poor condition, and the result of the fact that the wood processing companies achieve the lowest average ROE of all monitored sectors.

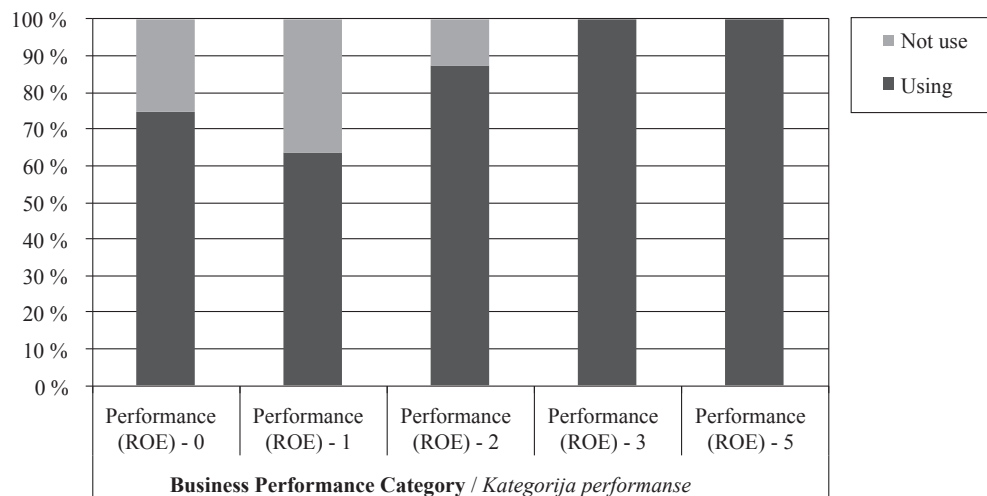The results of strategic management tools (strategic planning, controlling and reporting) in a set of

Table 2 Type of organizational structure in the companies of wood processing industry
Tablica 2. Tip organizacijske strukture u drvoprerađivačkim poduzećima

Type of organizational structure in the companies of wood processing industry *Tip organizacijske strukture u drvoprerađivačkom poduzeću*	Performance (ROE) - 0	Performance (ROE) - 1	Performance (ROE) - 2	Performance (ROE) - 3	Performance (ROE) - 5	Row totals *Ukupno*
Process / *procesna*	1	0	2	0	0	3
Divisional / *divizionalna*	0	2	0	0	0	2
Traditional functional *tradicionalna funkcijska*	6	6	5	3	3	23
Matrix / *matrična*	0	0	1	0	0	1
Any type / *bilo koja od navedenih*	1	3	0	0	1	5
Total / *ukupno*	8	11	8	3	4	34

Table 3 Use of strategic management tools in the companies of wood processing industry
Tablica 3. Primjena alata za strateško upravljanje u drvoprerađivačkim poduzećima

Using of strategic management tools in the companies of wood processing industry (strategic planning, controlling and reporting) / *Primjena alata u strateškom upravljanju u drvo-prerađivačkim poduzećima (strateško planiranje, kontroling i izvještavanje)*	Perfor-mance (ROE) - 0	Perfor-mance (ROE) - 1	Perfor-mance (ROE) - 2	Perfor-mance (ROE) - 3	Perfor-mance (ROE) - 5	Row totals / *Ukupno*
No / *ne*	2	4	1	0	0	7
Relative share / *u relativnom udjelu*	5.88 %	11.76 %	2.94 %	0.00 %	0.00 %	20.59 %
Yes / *da*	6	7	7	3	4	27
Relative share / *u relativnom udjelu*	17.65 %	20.59 %	20.59 %	8.82 %	11.76 %	79.41 %
Total / *Ukupno*	8	11	8	3	4	34
Relative share / *u relativnom udjelu*	23.53 %	32.35 %	23.53 %	8.82 %	11.76 %	100.00 %

Figure 1 Use of strategic management tools in the companies of wood processing industry in Slovakia
Slika 1. Primjena alata za strateško upravljanje u drvoprerađivačkim poduzećima u Slovačkoj

wood processing companies show that companies that did not use these selected management tools in their practice, failed to reach a better performance than group 2. Although 80 % of companies of wood processing industry use these strategic management tools and systems, performance groups 0-2, with negative or low value of ROE, are the most numerous.

The analysis of contingency tables in the sector of wood processing industry showed that companies do not use the BI information system. Two categories were occupied, 8 companies consider the introduction of BI in the longer term, and 26 companies do not con-

sider this possibility at all. BSC is a similar methodology, used by a company (purely foreign capital). Companies indicate an average or above-average satisfaction in terms of satisfaction with the tools and concepts.

In the research, some conclusions can be made on the basis of average values of performance in each category, determined by strategic parameters in the wood processing industry (Table 6).

Table 6 presents the analysis of five variables. In terms of organizational structure, the most powerful organizational structure is the matrix organizational structure in companies of wood processing industry.

Table 4 Use / introduction of BI in the companies of wood processing industry in Slovakia
Tablica 4. Primjena / uvođenje BI-a u drvoprerađivačkim poduzećima u Slovačkoj

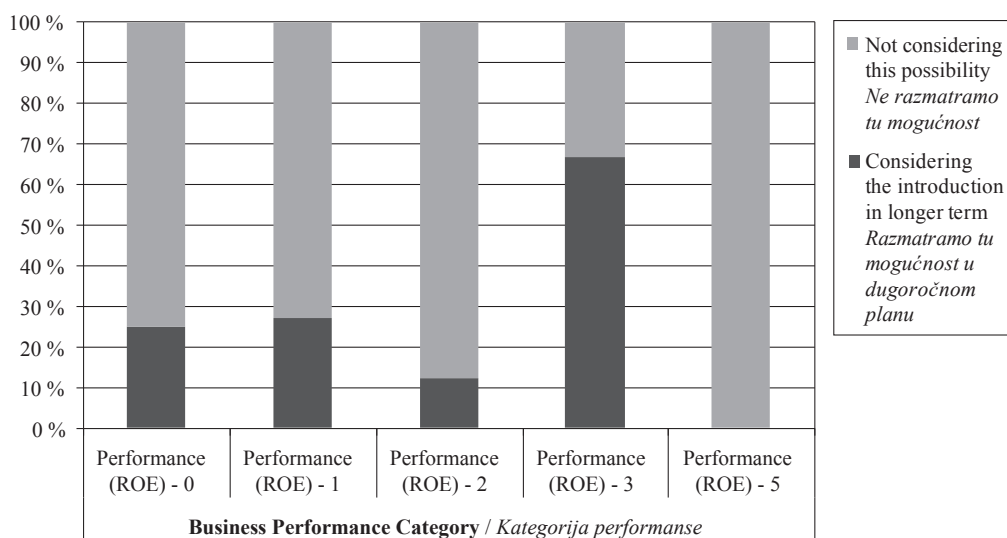| Use of BI / *Primjena BI-a*	Perfor-mance (ROE) - 0	Perfor-mance (ROE) - 1	Perfor-mance (ROE) - 2	Perfor-mance (ROE) - 3	Perfor-mance (ROE) - 5	Row totals *Ukupno*
Not considering this possibility *ne razmatramo tu mogućnost*	6	8	7	1	4	26
	17.65 %	23.53 %	20.59 %	2.94 %	11.76 %	76.47 %
Considering the introduction in longer term *razmatramo tu mogućnost u dugoročnom planu*	2	3	1	2	0	8
	5.88 %	8.82 %	2.94 %	5.88 %	0.00 %	23.53 %
Total / *ukupno*	8	11	8	3	4	34
Relative share / *u relativnom udjelu*	23.53 %	32.35 %	23.53 %	8.82 %	11.76 %	100.00 %

Figure 2 Use / introduction of BI in the companies of wood processing industry in Slovakia
Slika 2. Primjena / uvođenje BI-a u drvoprerađivačkim poduzećima u Slovačkoj

Table 5 Use of selected concepts / tools for strategic performance management in the companies of wood processing industry
Tablica 5. Primjena odabranih koncepcija / alata za strateško upravljanje poslovanjem u poduzećima drvoprerađivačke industrije

	Selected concepts / tools for strategic performance management in the companies of wood processing industry / *Odabrane koncepcije/alati za strateško upravljanje poslovanjem u drvoprerađivačkim poduzećima*	**do not use** *ne primjenjujemo*	**plan to use** *planiramo primjenjivati*	**< 2 years** *2 godine*	**2-5 years** *2-5 godina*	**> 5 years** *5 godina*	**low satisfaction** *nezadovoljni*	**average satisfaction** *zadovoljni*	**high satisfaction** *vrlo zadovoljni*
1	Financial indicators based on data from financial accounting / *financijski indikatori utemeljeni na podacima iz računovodstva*	5		4	7	18		15	14
%		14.71		11.76	20.59	52.94		44.12	41.18
2	Outcomes of management accounting	17	6	2		9		6	5
%	*rezultati upravljanja računovodstvom*	50.00	17.65	5.88		26.47		17.65	14.71
3	Controlling / *kontroling*	19	3	5	2	5		6	5
%		55.88	8.82	14.71	5.88	14.71		17.65	14.71
4	Balanced Scorecard (BSC) / *sustav uravnoteženih ciljeva*	32	1			1			1
%		94.12	2.94			2.94			2.94
5	Economic Value Added (EVA)	26	3	1	3	1		4	2
%	*dodana ekonomska vrijednost*	76.47	8.82	2.94	8.82	2.94		11.76	5.88
6	ABC costing (Activity Based Costing)	27	3	1	3			1	3
%	*troškovi prema aktivnostima*	79.41	8.82	2.94	8.82			2.94	8.82
7	BI (Business Intelligence) information system	28	6						
%	*informacijski sustav BI-a*	82.35	17.65						
8	Quality Management System	19	5	2	2	6		5	4
%	*sustav upravljanja kvalitetom*	55.88	14.71	5.88	5.88	17.65		14.71	11.76
9	Lean management and Kaizen	31		2		1	1	1	1
%	*vitko upravljanje i Kaizen*	91.18		5.88		2.94	2.94	2.94	2.94
10	The concept of CRM (Customer Relationship Management) / *koncepcija upravljanja odnosima s korisnicima*	28	3	1	2			3	
%		82.35	8.82	2.94	5.88			8.82	
11	KPI system (Key Performance Indicators)	29		2	1	2		3	2
%	*KPI sustav (ključni indikatori poslovanja)*	85.29		5.88	2.94	5.88		8.82	5.88

* Notice: presented concepts were selected from worldwide research in the area of application of various models and methods for business performance managing, by authors Rigby and Bilodeau - Rigby, D., Bilodeau, B. (2013). Management Tools and Trends 2013. Boston: Bain & Company. http://www.bain.com/Images/BAIN_BRIEF_Management_Tools_%26_Trends_2013.pdf

Table 6 Average performance categories - file 2: wood processing industry
Tablica 6. Prosječne kategorije djelovanja - skupina 2: drvoprerađivačka industrija

Type of organizational structure / *Tip organizacijske strukture*						
Answers / *Odgovori*	**Process** *Procesna*	**Divisional** *Divizionalna*	**Traditional functional** *Tradicionalno funkcijska*	**Matrix** *Matrična*	**Any type** *Bilo koji tip*	**All categories** *Sve kategorije*
ROE Average / *prosječna točka pokrića*	1.333333	1.000000	1.739130	2,000000	1,600000	1,647059
Frequency / *učestalost*	3	2	23	1	5	34
The way of linking business strategy with a system of measurement and business performance management *Način povezivanja poslovne strategije sa sustavom mjerenja i upravljanja poslovanjem*						
Answers / *Odgovori*	0 – Insufficiently *Nedovoljno*		1 – Well *Dobro*	2 – Very well *Vrlo dobro*		All categories *Sve kategorije*
ROE Average / *Prosječna točka pokrića*	1.230769		1.000000	2.055556		1,647059
Frequency / *Učestalost*	13		3	18		34
Use of methods of strategic business planning and controlling *Primjena metoda poslovnoga strateškog planiranja i kontrolinga*						
Answers / *Odgovori*	Not using *Ne primjenjuje se*		Using but without BI *Primjena bez korištenja BI-a*			All categories *Sve kategorije*
ROE Average *Prosječna točka pokrića*	1.000000		1.733333			1.647059
Frequency / *Učestalost*	4		30			34
Use of software tools to measure and manage business performance *Primjena softverskih paketa za mjerenje i upravljanje poslovanjem*						
Answers / *Odgovori*	Not using software *Bez primjena softvera*		Using software *Primjena softvera*			All categories *Sve kategorije*
ROE Average *Prosječna točka pokrića*	1.400000		1.689655			1.647059
Frequency / *Učestalost*	5		29			34
Use of Management Information Systems (MIS) in the company / *Primjena upravljačko-informacijskih sustava u poduzeću*						
Answers *Odgovori*	Not using MIS *Bez MIS-a*		Using MIS *Primjena MIS-a*			All categories *Sve kategorije*
ROE Average *Prosječna točka pokrića*	1.500000		1.666667			1.647059
Frequency / *Učestalost*	4		30			34

When there is a connection between business strategy and system of measurement and management performance, a better performance is recorded than when there is no such connection. Enterprises that use the methods of strategic business planning achieve better business performance than enterprises that do not use them. Companies that use some software tools or MIS information system achieve better business performance than companies that do not use MIS. However, the results of software for measuring and managing of business performance and information systems show only a slight difference between the groups of companies of wood processing industry that use and do not use the selected tools.

4 CONCLUSION
4. ZAKLJUČAK

The results of our scientific research show that companies from the selected Slovak industries, which achieve above average performance, are strongly focused on managing their strategic performance by applying many modern management concepts and methods.

Based on the results presented in this paper, the following can be concluded in the area of the research hypotheses, which were set out at the beginning of the strategy research.

H 1: Do not reject H_0. The impact of a particular organizational structure on the business performance has not been established. A correlation has been found between business performance and the use of organizational structure, but without specifying a particular type of structure.

H 2: H_0 is rejected in favor of H_1 for the concept of strategic long-term business planning and controlling system. Assumption failed in the examination of all management tools. The impact was demonstrated of strategic planning and controlling studied separately (used/not used) to a higher – over average performance above the valued of ROE of 4 % in used concepts.

H 3: Do not reject H_0. BSC methodology itself does not affect the business performance of wood-processing enterprises. However, in the statistical file consisting of all analyzed industries (Table 1 - File 1), this dependence has been

confirmed. BSC methodology enables industrial enterprises to achieve higher performance.

H 4:   Do not reject H_0. BI information system itself does not affect the business performance of wood-processing enterprises. However, in the statistical file consisting of all analyzed industries (Table 1 - File 1), this dependence has been confirmed. The use of BI information system has an impact on better business performance. The analysis highlighted two categories - companies that use BI system, they achieve the value of ROE over 4 %, companies that do not consider the introduction of a BI information system, reach lower performance.

H 5:   Do not reject H_0. However, in the statistical file consisting of all analyzed industries (Table 1 - File 1), this dependence has been confirmed. H_0 is rejected in favor of H_1 at the financial performance indicators, controlling, quality management system, in which the time use of these strategic parameters is important for the performance achieved. The results show that the use of financial indicators to measure and manage business performance brought to higher levels of performance after 2 years, in the quality management system after 5 years, and companies typically achieve ROE above 4 %. However, in the concept of controlling, which is used for more than five years, performance is reflected by ROE above 7 %.

Based on our research, it has been shown that an important tool to improve the overall business performance also in conditions of Slovak wood-processing industry seems to be a system of strategic performance management. However, compared to the automotive or engineering industry (results of our research related to automotive and engineering industry will be published in a separate scientific paper) this has not been confirmed with a sufficiently high degree of statistical relevance. Still, we believe that traditional business management based only on financial performance must be supplemented and confronted also in conditions of wood-processing industry with the methods and models for strategic business performance management.

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