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Studia commercialia Bratislavensia Volume 10; Number 38 (2/2017); pp. 215-226
DOI: 10.1515/stcb-2017-0020 ISSN 1339-3081

Analyzing the management process in small and medium-sized enterprises in the Region of South Bohemia

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Abstract

The entry is aimed at analyzing the process of managing small and medium-sized enterprise, specifically in the Region of South Bohemia. The testing sample included 180 enterprises. The fundamental statistical information about SMEs is included, focusing of the numbers, the size category, and their specialization in the Region of South Bohemia. The research activities were aimed at the steepness of management structures and at their extent on all management levels. The analysis indicates that micro-enterprises prefer one management level, while small and middle-sized enterprises prefer two management levels with the statistic dependence on the size category. In regard to the number of employees on individual management levels, the top positions have from 6 employees up to 30 on the operative level. The general business trend involves a transfer to the functional management structure. With respect to the strategic management and decision-making, enterprises boost an attractive prospect of mainly their own sources. A statistical correlation was proved between the elaborated strategy, the size of the enterprise and number of management levels. A strong correlation between the number of management levels and the aim of the enterprise i.e. the type of organization structure was not proved.

Key words

Organizational and management structures, enterprise profitability, transforming enterprise architectures

JEL Classification: M210

Introduction

From the historical perspective, the Region of South Bohemia has always been perceived as an agricultural, fishing, and forestry area. During the course of the last century, it had slowly begun to develop industry focusing on manufacturing activities. This region features more than seven thousand ponds with an overall area of more than three thousand hectares of water area. As of December31st 2015, there were 130,849 SMEs active in the region, of which 113,172 were self-employed persons and 4,897 were agricultural entrepreneurs. The overall number of employees in SMEs was 163,411. Currently, the dominant structures on the market in the region are wholesale and retail, as

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well as automobile repairs and maintenance. There is alarge number of microenterprises in the areas of accommodation, restaurants and hospitality connected to tourism. Small engineering enterprises are also common. Microenterprises (subjects with 1-9 employees) dominated the region and made up 7.4 % of the region's enterprises. Small enterprises (10-40 employees) were 1.4 %; medium-sized enterprises (50-249 employees) were 0.4 %.

Small and medium-sized enterprises in the Czech Republic is in 85 % of cases being conducted in rural areas, which make up 75 % of the country's area. The analysis conducted by the Association of Small and Medium-Sized Enterprises (2017) shows that there is a significantly negative development of enterprises in rural areas – more than 45 % of enterprises are categorized as less developed. The number of scientific publications demonstrate the causal relation between the development of rural regions and the development of small and medium-sized enterprises. The deciding factor for the possible development of the region is the accessibility of human, natural, social, technical, and financial capitals (Bridge, O´Neill, Cromie, 1998; Arriba, 2009). The issue of developing production functions of the region requires (Vaishar et al., 2011) that as much income as possible remained or was reproduced in SMEs that are closer to an endogenous direction of development. Interconnecting all functions of regional development into one harmonious whole seems to be key, as well as synergy and cooperation of individual activities and players of development on both the local and the regional levels while respecting the specific needs of the given area (Van der Ploeg et al., 2000; Muilu et al., 2004, Marsden, Sonnino, 2008). Many authors (García-Ruiz et al., 1996; Fjellstad, Dramstad, 1999; Moreira, Rego, Ferreira, 2001; Novotná, 2000; Olsson, Austrheim, Grenne, 2000; Zemek, Heřman, Bufková, 2001; Kubeš, Mičková, 2003) focused on the analysis of development functions of selected areas in various regions within selected countries. It is, therefore, evident that the issue of SMEs in the current state of economic development needs to examine not only enterprise architecture of SMEs but its potential fundaments as well – its external environment. Only if these directions are in harmony, we can expect synergy and long-lasting effect of such solutions (Váchal, Straková, 2015; Vochozka, Váchal, Straková, 2016).

When discussing SMEs, the 21st century has raised questions of efficiency, stability, and their relation to the external environment of enterprises (Havlíček, Kašík, 2005; Šebestová, 2007; Vojík, 2009; Hamplová, Provazníková, 2015; Hribik, 2010; Helfat, 2007). Opinions that state that strategic approach to managing small enterprises is not valid have been gradually abandoned (Pleitner, 1994; Brodbeck et al.; 1995). Elements of strategic management of SMEs have started to be relevant in the 1960s and 1970s primarily in developed economies with a developed market economy. Porter (1995) introduced a new term to strategic management – the competitive advantage. The 1990s were an important turning point. At that point, the world and European markets were saturated and were forced to change their previous approaches to management and planning. In Czech conditions, the state managed and planned economy begun to transfer into a system of market economy connected to European and world-wide economic systems. SMEs gradually found their place in the new market economy playing irreplaceable transformational and stabilizing roles (Kislingerová, Nový et al., 2005; Synek et al., 2006; Vojík, 2006; Veber, Srpová et al., 2008).

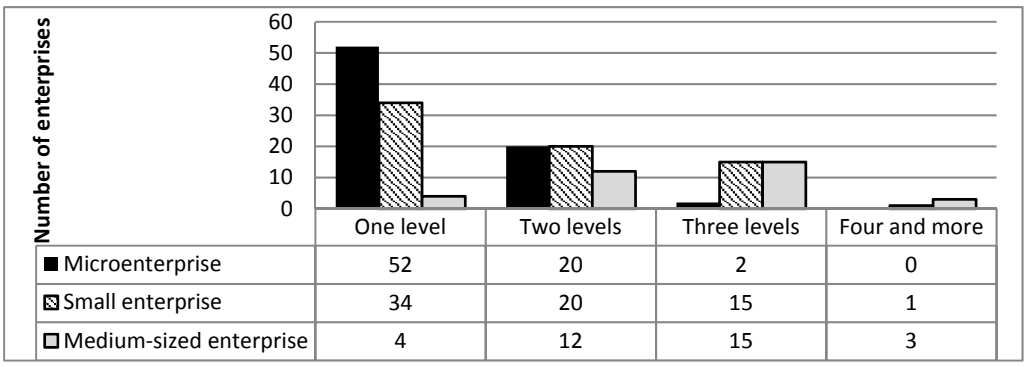
1 Method

The basis for the entry is a questionnaire survey in the entrepreneurial sector in the entire Czech Republic (Straková, Váchal, Pártlová, 2016, 2017), which is still being conducted. The overall number of enterprises contacted via trained questioners is more than 500 with more than 350 SMEs. As a part of this sample, SMEs from the Region of South Bohemia were selected making the current testing sample 180 enterprises – 74 microenterprises, 71 small enterprises, and 35 medium-sized enterprises. The research also deal with increasing trends in organization business structures. Simultaneously, the number of employees at individual levels of management in relation to the distinction of size categories was analysed. The second area of research focused on the strategic management and decision-making in the current business environment. It dealt with boosting prospects, business strategies and their decomposition to tactical and operative levels. The way of elaborating the materials (internal or external sources) was also examined. The statistical correlation was tested between levels of strategic management and the size of the enterprise, sectoral, number of management levels and type of organizational structure. From the available statistical methods, the Pearson's chi-squared test and the Cramer coefficient of contingency were selected. Statistical calculations were conducted by using the statistical program R. All statistic tests were done on the standard confidence level 0.05, i.e. 95 % of reliability. Provided p-value is lower than level of importance 0.05, the difference will be considered as significant.

2 Results and Discussion

From the perspective of the steepness of the management structures (Graph 1), we can conclude that small and medium-sized enterprises primarily feature one level of management; medium-sized enterprises feature two management levels. The size of the enterprise by itself predetermines the number of management levels; a statistical dependency is present. Primarily in microenterprises, this is caused by the dominating functional organizational and management structures, similarly to the medium-sized enterprises.

Graph 1 The number of management levels in individual size categories of SMEs



	One level	Two levels	Three levels	Four and more
Microenterprise	52	20	2	0
Small enterprise	34	20	15	1
Medium-sized enterprise	4	12	15	3

Source: Own calculations

From the perspective of the limited extent of the entry, the authors chose to only comment the results in written form.

When analyzing *the number of employees in the top level (top management)*, we can state that all three size categories feature 6 or less employees in the top management positions. Primarily in medium-sized enterprises, there should be some redistribution of competences and creating departments with individual focuses, such as f. e. the sales manager, the financial manager, or the human resources manager.

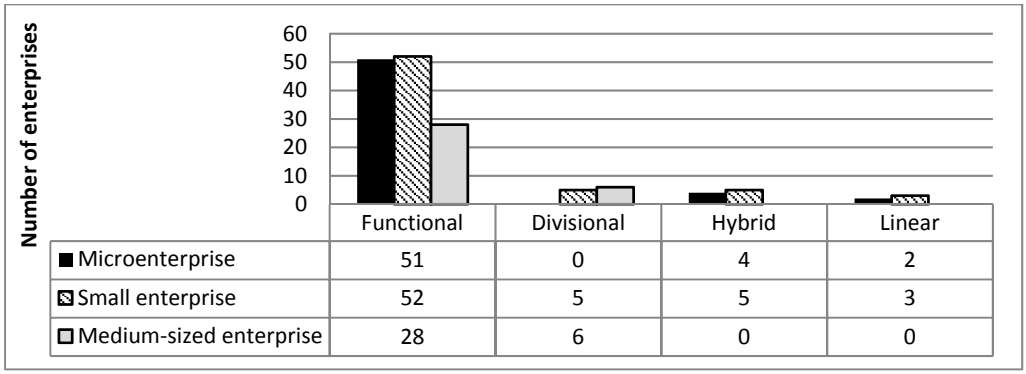
In the *position of middle management*, the number of managers on the tactical level is around the extent of 25 or less employees; only rarely it is featured in the extent of 25 or more employees – primarily in manufacturing enterprises.

From the perspective of the *number of employees on the operative level*, the categories of microenterprises and small enterprises (30 or less employees) had the highest extent of management. This can be explained by the size of the enterprises and their focus.

The extent of tactical management is around 20 or less employees in the size category of medium-sized enterprises.

The management and organizational structures from the perspective of their implementation in the individual size categories were also the target of the research. The results are shown in Graph 2.

Graph 2 The types of organizational structures in individual size categories of SMEs



	Functional	Divisional	Hybrid	Linear
Microenterprise	51	0	4	2
Small enterprise	52	5	5	3
Medium-sized enterprise	28	6	0	0

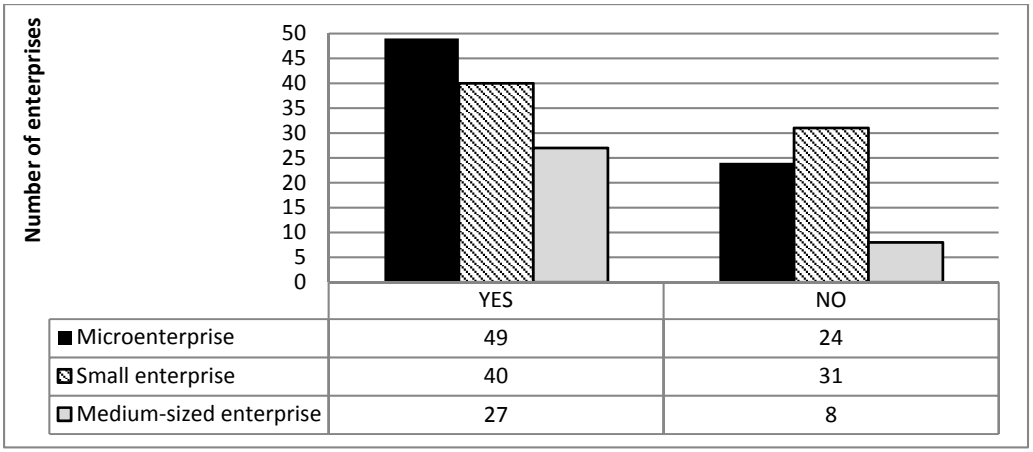
Source: Own calculations

The majority of featured enterprises have the so-called functional organizational structure. The functional structure reflects changes that are currently taking place in the business sector. These are primarily production specializations, increasing innovational activity of such enterprises, introducing informational technology – all during increasing competitive pressure. More than 90% managers were satisfied with the current organizational structure.

The survey then focused on questions of strategic management and decision-making. The results featured in graphs 3, 4, and 5 show data on vision processing, the enterprises' mission, own strategies and their implementation into the levels of tactical and operative plans.

The results featured in Graph 3 show that majority of surveyed enterprises have a vision, mission, and formulated strategic goals of further development. It is surprising and a very positive result especially for microenterprises and small enterprises. From the perspective of transferring strategic goals into the tactical level (Graph 4), the survey shows that microenterprises and small enterprises focus primarily on strategic goals, which differs from medium-sized enterprises where the transfer of strategic goals to the tactical level is in majority realized.

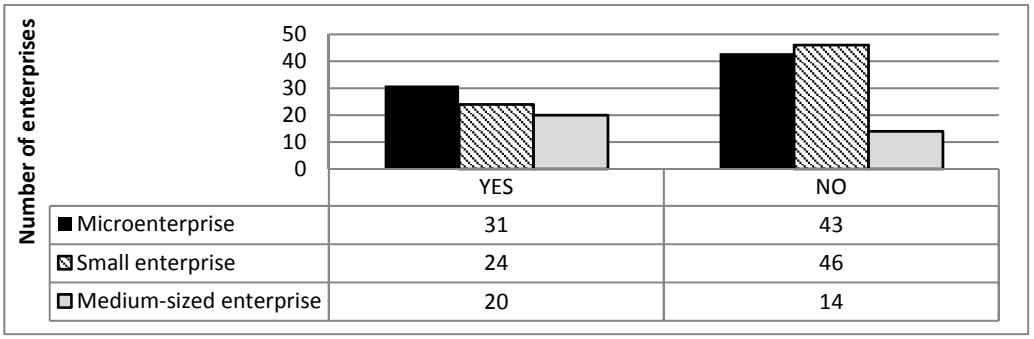
Graph 3 Creating of visions, missions, and strategic goals for the individual areas of the enterprise



	YES	NO
Microenterprise	49	24
Small enterprise	40	31
Medium-sized enterprise	27	8

Source: Own calculations

Graph 4 Strategic goals and their processing



	YES	NO
Microenterprise	31	43
Small enterprise	24	46
Medium-sized enterprise	20	14

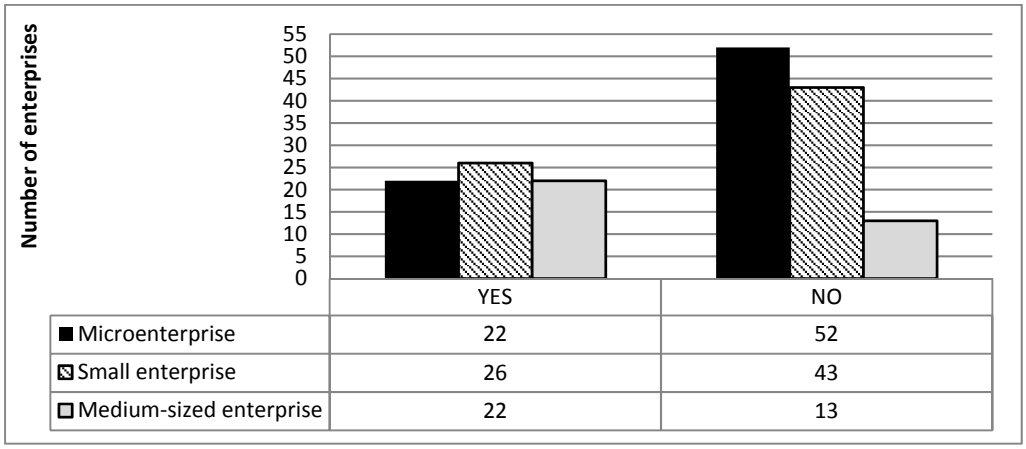
Source: Own calculations

As demonstrated in Graph 5, microenterprises and small enterprises in majority lack an enterprise strategy while medium-sized enterprises usually feature a fully formulated enterprise-wide strategy. The size category of the enterprise is crucial here, including the knowledge and skills of managers on the individual levels of management.

The following question focused on the method of creating an enterprise strategy (Graph 6). If the respondents answered that they have a fully formulated enterprise-wide strategy, it was usually provided by the employees of the enterprise in the

case of microenterprises and small enterprises; medium-sized enterprises usually co-operated with top management. Creating an enterprise strategy is usually also connected to dividing such strategy into partial strategies (Graph 7). Enterprises that have a fully formulated enterprise-wide strategy also divide the strategy into levels of the so-called functional or partial strategies. Enterprises that feature a simple linear structure do not divide their enterprise strategy into partial strategies. In connection to this, the cooperation of the top managers with middle management was observed on the tactical – meaning the middle – level. Approximately a third of the enterprises show signs of the top management cooperating with middle management when creating partial strategies. This fact can have a positive effect on creating strategies thanks to its complexity as well as the correct processing of the content.

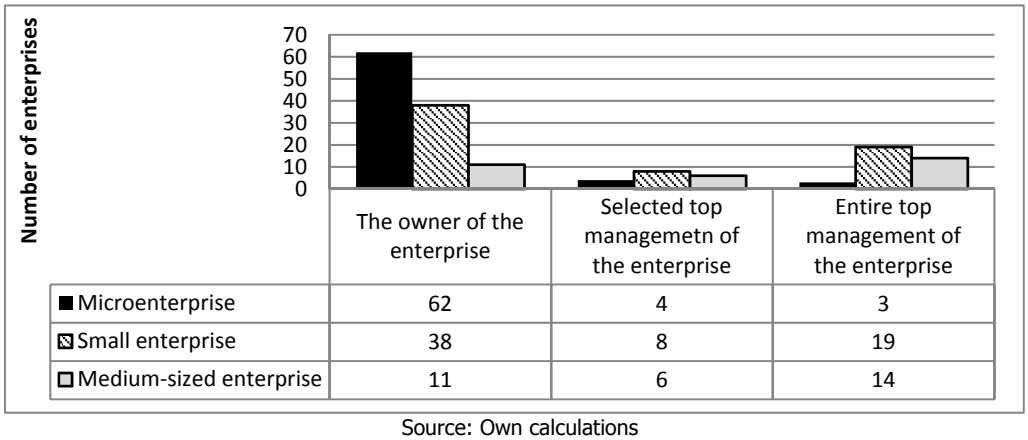
Graph 5 Long-term development of the enterprise (Enterprise strategy)



	YES	NO
Microenterprise	22	52
Small enterprise	26	43
Medium-sized enterprise	22	13

Source: Own calculations

Graph 6 Who cooperates on the long-term development of the enterprise

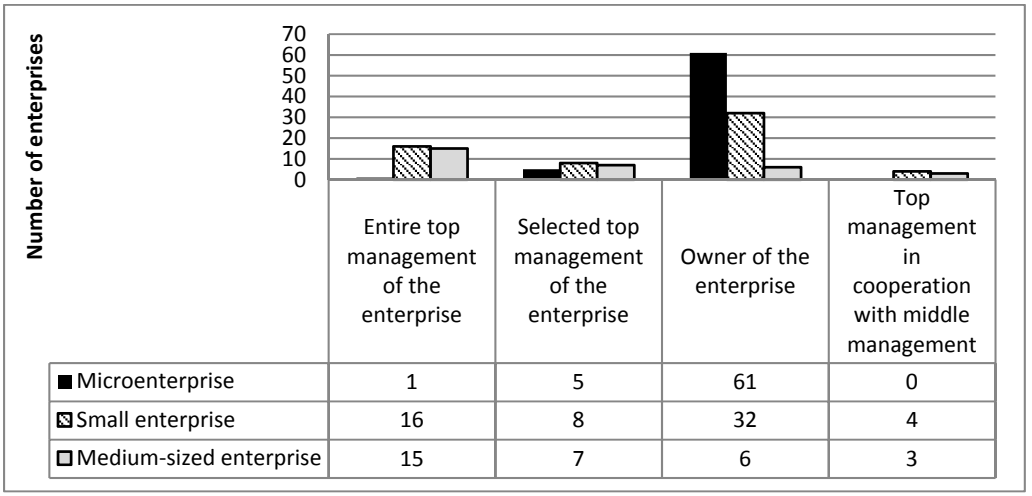


	The owner of the enterprise	Selected top managemetn of the enterprise	Entire top management of the enterprise
Microenterprise	62	4	3
Small enterprise	38	8	19
Medium-sized enterprise	11	6	14

Source: Own calculations

The dependency between the created enterprise strategy and the size of the enterprise was tested (α = 0.05, p = 0.003973, Chi-square = 11.0564, Number of respondents 178, V = 0.2492). The p-value is lower than the α parameter, which means that according to the alternative hypothesis there exists a dependency between the existence of a long-term development plan and the size of the enterprise. The p-value indicated a relatively significant dependency although it is only 0.2492.

Graph 7 Creating of partial strategies



Source: Own calculations

In the last part, the dependencies of selected parameters were tested. The first test focused on the dependency between the number of management levels and the creating of a long-term development strategy (see Table 1).

Table 1 Dependency between the number of management levels and the creating of a strategy

How many levels does your enterprise have					
Who cooperates on creating the strategy	**One level**	**Two levels**	**Three levels**	**Four and more levels**	**In total**
Entire top management of the enterprise	7	11	14	3	35
Selected top management of the enterprise	4	5	9	0	18
The owner of the enterprise	71	31	7	1	110
In total	**82**	**47**	**30**	**4**	**163**

Source: Own calculations

The calculated values (α = 0.05, p = 0.00000001239, Chi-square = 47.8964, Number of respondents = 163, V = 0.5421) indicate a very high level of dependency (the p-value is smaller than the α parameter) between the number of management levels and the group of persons cooperating on creating a long-term development plan. Even the level of this dependency having the value of 0.5421 is relatively high.

The dependency between the number of management levels and the focus of the enterprise (its sector) was also tested; see Table 2.

Table 2 Dependency between the level of management and the enterprise's focus

Number of management levels					
Focus of the enterprise	**One level**	**Two levels**	**Three levels**	**Four and more levels**	**In total**
Primary sector	4	1	2	1	8
Services	64	38	21	2	125
Manufacturing and industry	21	13	8	1	43
In total	**89**	**52**	**31**	**4**	**176**

Source: Own calculations

The p-value is higher than the α parameter (α = 0.05, p = 0.5297); based on the null hypothesis, there is no dependency between the focus of the enterprise and the number of management levels.

The dependency between the number of management levels and the size of the enterprise was then also tested (see Table 3).

Table 3 Dependency between the number of management levels and the size of the enterprise

Number of management levels					
Size of the enterprise	**One level**	**Two levels**	**Three levels**	**Four and more levels**	**In total**
Microenterprise	52	20	2	0	74
Small enterprise	34	20	15	1	70
Medium-sized enterprise	3	12	14	3	32
In total	**89**	**52**	**31**	**4**	**176**

Source: Own calculations

Based on the calculated results (α = 0.05, p = 0.000000008665, Chi-square = 48,6737, Number of respondents = 176, V = 0.5259), we can state that if the p-value is significantly smaller than the α parameter then there exists a very high level of dependency between the number of management levels and the size of the enterprise. The level of contingency is also very high, namely 0.5259.

The last test focused on the dependency between the organizational structure type and the number of management levels (see Table 4). The results (α = 0.05, p = 0.719) show that the p-value is significantly higher that the α parameter. Based on the null hypothesis, there is no dependency between the organizational structure of the enterprise and the number of management levels.

Table 4 Dependency between the organizational structure and the number of management levels

	Number of management levels				
Organizational structure	**One level**	**Two levels**	**Three levels**	**Four and more levels**	**In total**
Divisional management structure	2	4	3	0	9
Combined management structure	5	2	3	0	10
Department management structure	56	44	25	4	129
In total	**63**	**50**	**31**	**4**	**148**

Source: Own calculations according to the questionnaire survey

Conclusion

The analysis of the management system of SMEs and the evaluation of strategic management and decision-making created an objective glance at one of the existing potential development reserves of enterprise activities. The results that were collected during the research conclusively document it.

In the areas of organization and management, it can be conclusively stated that:

- Assessing the abruptness of controlling structures proved that micro and small enterprises prefer one management level, while middle-sized enterprises prefer two management levels with proven statistical correlation of the size category of the enterprise. Both categories showed a transfer to the functional organization structure.
- In regard to the number of employees at the individual management levels, following conclusions have been reached: All size categories have 6 and fewer employees at the TOP level, the middle level of management does not exceed 25 managers and the operative level indicated up to 30 employees.

- With respect to the organization structure, there is a significant deviation from the common organization structures to the functional ones. This accelerating trend reflects changes in the business sphere, e.g. the process of professional specialization, innovation process and the process of increasing the added value of their products and services. All the same, more than 90 % of enterprises consider their current organization highly satisfactory.

The results of the enterprise strategy area can be presented as follows:

- I regard to the strategic management and decision-making, it might be concluded that the major part of enterprises boosts an inviting prospect of the strategic goals of the further development, which is indicates a surprising, yet positive outcome. As a matter of fact, working out strategic goals into the tactical level of micro and small enterprises is not carried out, while the decomposition of strategic goals is mostly carried out in middle-sized enterprises.
- On the other hand, the formal elaboration of the business strategy is dominated by the management (owners) of the enterprise, beginning with middle-sized enterprises, then board of directors, where decomposition to lower levels of management is carried out. Ca 30 % of enterprises showed an active cooperation of the board of directors with the middle management on developing a coherent strategy.
- A statistically significant correlation was proved between the elaborated business strategy and the size of the enterprise ($\alpha = 0.05$, $p = 0.003973$, Chi-square = 11.0564, number of respondents 178, $V = 0.2492$), and at levels of management with the view to the management of working out strategies ($\alpha = 0.05$, $p = 0.00000001239$, Chi-square = 47.8964, number of respondents = 163, $V = 0.5421$).On the other hand, a correlation between the number of levels of management and aim of the enterprise ($\alpha = 0.05$, $p = 0.5297$) and between the type of the organization structure and the number of levels of managements was not proved on the grounds of the zero hypothesis.

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