

Dynamic Capabilities and the Development of Small Business Resource Potential

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Abstract. Dynamic capabilities are a substantive component of the resource-based theory of enterprise emphasizing the importance of certain transformations of the resource base to enable better allocation of resources and capabilities in the process of managing a firm's development. At the same time, they contribute to shaping the entire resource potential of enterprises, including both the level of those resources, and their desirable attributes that allow a firm to build a sustainable competitive advantage. The concept of dynamic capabilities is also closely related to the very nature of small business, as it highlights the importance of entrepreneurship which is based on opportunities and organizational flexibility. Bearing in mind the above, the objective of this paper is to identify the directions, scope and configurations of application of dynamic capabilities, as well as to assess their use for the development of small business resource potential. To enable achievement of this objective, a survey was conducted on a random sample of 356 micro, small and medium-sized enterprises (SMEs) from the European Union. Three research hypotheses have been verified. The findings confirm the considerable positive influence of dynamic capabilities on the development of small business resource potential, with the key role played by specific configurations of dynamic capabilities adapted to the nature of the smallest economic operators. The paper also formulates recommendations concerning the changes in the allocation of commitment to developing the dynamic capabilities of SME sector companies.

Keywords: dynamic capabilities, business resources, resource-based view, small business.

1. Introduction

The concept of dynamic capabilities (Teece, Pisano, 1994; Teece *et al.*, 1997) is one of the key components of the resource-based view (Lin, Wu, 2014) highlighting the importance of certain transformations of the resource base to optimize the allocation of resources and capabilities in the processes of managing the development of contemporary firms. The concept is simultaneously closely related to the nature of small business, as it stresses the importance of entrepreneurship which is based on opportunities, dexterity, organizational flexibility and networking, i.e. the factors on which the contemporary competitive edge of SMEs relies most heavily.

Bearing in mind the above, the objective of this paper is to identify the directions, scope and configurations of application of dynamic capabilities, as well as to assess their use for the development of small business resource potential. To enable achievement of this objective, a survey was carried out on a sample of 356 micro, small and medium-sized enterprises from the European Union.

2. Theoretical Background and Hypotheses

Every firm relies on specific business resources which comprise diverse factors enabling the implementation of business processes, and achievement of market outcomes. The predominant approach in literature is to divide resources into two categories (Hill, Jones, 2012):

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- tangible resources encompassing physical entities, such as land, buildings, manufacturing plants, technical equipment, inventory, and financial means which include cash, and the ability to raise funds from various sources,
- intangible resources comprising nonphysical entities which primarily rely on knowledge and have three main attributes: production uncertainty, fragmented appropriability and non-separability from organizational context (Webster, Jensen, 2006). Intangible resources are classified in different ways in literature, (Fernández *et al.*, 2000), however their basic categories include: (1) human resources, including competence and experience, attitudes and other psychophysical traits of business owners, managers and employees, (2) relational resources, including formalized and non-formalized relations and contacts with the environment, e.g. with clients, competitors, suppliers, strategic allies, financial institutions, insurance institutions, regulatory bodies, or the local community, (3) market resources, including product brand, goodwill and information concerning the market, (4) technological resources, including know-how, patents, licenses, and (5) organizational resources, including management and decision-making processes, organizational structure and culture, instructions, procedures and organizational routines.

The level of resources considerably affects the firm's possibilities to operate on the market, the level of generated profit and business performance. However, it has been noticed that in order to create a strategic competitive advantage, a firm should develop specific characteristics of its resources. This idea laid the groundwork for the creation of the resource-based view (RBV) in management sciences (Barney, 1991). According to this concept, the strength and sustainability of a competitive advantage derives from the resources and capabilities a firm controls that are (1) valuable, which means they should create a strategic value to outperform the competition, seize the market opportunities, or reduce own weaknesses, (2) rare, which means they should be unique and not commonly available on the market, (3) imperfectly imitable, which refers to their uniqueness and isolation that is difficult to duplicate by the competitors, and (4) non-substitutable, which means that it is hard for the competitors to gain access to substitutes, or alternative solutions. Those characteristics became the basic components of the VRIN framework which later developed into the VRIO framework highlighting certain organizational capabilities that are necessary for equipping resources with desirable attributes that ensure the achievement of a sustainable competitive advantage. The model involves an analysis of the firm's capabilities with regard to four tasks, including (Barney, Hesterly, 2015):

- resource capability to exploit market opportunities, or neutralize external threats (value),
- undistributed resource control, concentrated in the hands of the company (rare),
- the company's key resources are difficult or costly to imitate (imitability),
- readiness and organizational capability of a firm to use resources (organization).

The resource potential of enterprises is reflected not only in the level of resources held by a firm, but also in the level of development of attributes of those resources in accordance with the VRIN/VRIO frameworks. Shaping and exploiting this potential is particularly important to small businesses characterized by a substantial shortage of resources, both with respect to tangible and intangible assets (considered mainly in comparison with large enterprises), which limits the scale of business operations, the level of marketing activity, research and development activity, technological advancement, investments, or innovation (Bettioli *et al.*, 2012; Qian *et al.*, 2014; Block *et al.*, 2015). R.W. Griffin (2016) notes that under such conditions it is essential that resources are managed correctly, since any mistakes in that regard may have a much more negative impact on a small business than they would have on large enterprises.

Development of the methods for resource management in SMEs is conditional upon those firms implementing the principles of the resource-based view in the management of organizations (RBV), which should be applied taking into account the nature of small business (Torrès, 2003). This nature manifests itself in the entrepreneurial management style involving a high level of autonomy, flexibility of action, and ability to proactively shape the development processes and market operations (Alpkan *et al.*, 2007; Arief *et al.*, 2013). The concept of dynamic capabilities which stresses the importance of entrepreneurship based on

opportunities and organizational flexibility is a valuable solution within the RBV framework (Teece, 2009). Its assumptions focus on building a dynamic competitive advantage (Helfat, 2007) by enhancing, combining, protecting and reconfiguring the company's tangible and intangible resources (Teece, 2007), as well as by specific allocation of resources and capabilities in the process of managing the firm's growth (Kor *et al.*, 2007).

The research carried out by A. Lanz and M. Passarelli (2014) based on longitudinal case studies demonstrates that the concept can be successfully implemented in SMEs. The concept's features, such as the development of organizational thinking, co-specialization, internal coordination, integration, transformation and orchestration of strategic resources, emphasize the importance of entrepreneurship, dynamics and flexibility in the process of managing the development of micro, small and medium-sized enterprises. A review of relevant literature suggests that the most important dynamic capabilities are (Salunke *et al.*, 2011; Teece, 2014):

- ability to identify and assess opportunities and market risks,
- ability to quickly mobilize resources and seize the market opportunities,
- ability to reconfigure resources and adapt the company to the changing conditions by introducing changes in the structure and scope of operations,
- ability to constantly renew the firm's resource base in line with the existing trends,
- ability to protect the resources held by the firm,
- ability to configure and coordinate resources to enable the implementation of the company's strategic goals,
- ability to acquire resources from external sources,
- ability to strengthen and augment the resource base depending on the firm's current and future needs,

The theoretically assumed possibility of using dynamic capabilities to shape the resource potential of small business has led to formulating the following research hypotheses:

H1: The use of dynamic capabilities substantially affects the level of resources at the disposal of SME sector companies

H2: The use of dynamic capabilities substantially affects the development of the desirable characteristics of SMEs' resources in accordance with the VRIN/VRIO frameworks.

However, the scope of application of dynamic capabilities to shaping the resource potential of SME sector companies should also be determined by the specific nature of small business. This nature involves considerable resource limitations determined by certain definitions of micro, small and medium-sized enterprises, low formalized organisation systems, intuitive management style based on incremental actions and the resulting restricted use of solutions typical of design, planning and positioning schools of strategic management (Mazzarol *et al.*, 2011; Bannier, Zahn, 2012). This leads to formulating the following research hypothesis:

H3: The use of dynamic capabilities to shape the resource potential of SME sector companies is associated with the need to focus on a particular configurations of dynamic capabilities adapted to the special nature of small business.

The adopted research hypotheses are aimed at acquiring new knowledge regarding the directions, scope and configurations of use of dynamic capabilities, and well as evaluating the application of dynamic capabilities to the development of small business resource potential. The hypotheses were verified through empirical studies described in further sections of the paper.

3. Research Methodology

In order achieve the objective of the study and verify the adopted research hypotheses, the nomothetic research approach was used which seeks to make generalizations based on the observations of single facts, or events (Bhattacharjee, 2012). The research method employed in this study was a survey (Bryman, Bell, 2015). The method had successfully been applied in previous studies concerning the nature and application

of firms' dynamic capabilities (Barreto, 2010). The research technique used was a Computerized Self-Administered Questionnaire (CSAQ) (Callegaro, Manfreda, Vehovar, 2015). The research tool was a self-designed survey questionnaire made available to the respondents in an electronic form through the www.webanieta.pl system. Companies received an email inviting them to participate in the survey.

The research was conducted on a random sample of 356 SMEs, including 235 (66%) micro, 89 (25%) small and 32 (9%) medium-sized enterprises. The size of the enterprises was determined based on the integrated criteria of the uniform, formal definition of small business used in the European Union, formulated by the European Commission (2015). The enterprises under study mainly had the form of individual companies (55%), or limited liability companies (24%), operating mainly in the services sector (69%), usually in markets that were national (42%) or international in scope (27%). The majority of firms have been present in the market for over 20 years (31%), or between 5-10 years (29%), mainly in traditional (71%), rather than advanced technology sectors (29%). Moreover, the character of the research technique used indicates that all firms under study have internet access and use electronic mail on a regular basis.

The respondents mostly included the owners of the companies under examination (65%), less frequently senior managers (22%), or employees authorized by the management to participate in the survey (13%). The majority of them were men (42%), people aged 31-50 years (60%) educated to a degree level (84%) in technical subjects (36%), or economics (31%).

The respondents' opinions were subjected to statistical analysis performed by the IBM SPSS Statistics software (Field, 2013) using quantitative statistical methods, such as (Swift, Piff, 2014): arithmetic mean as a measure of location, Pearson's correlation coefficient r_{xy} , Spearman's correlation coefficient r_s and their significance tests as measures of interdependence of phenomena, analysis of multiple linear regression to evaluate the effect of the independent variables on the dependent variable. The strength of interdependence between phenomena was evaluated using the solution suggested by J. Cohen (1992), where the following levels of dependence were adopted as the threshold limit values of linear correlation coefficients: 0.1 - weak; 0.3 - medium; 0.5 - strong, 0.7 - very strong. Cronbach's coefficient alpha (L. Cronbach 1951) was applied to assess the reliability of measurement scales used to calculate the values of synthetic indicators. An alpha value of $Cr.> 0.7$ was adopted as an acceptable level of the coefficient (Sarstedt, Mooi 2014).

4. Results and Discussion

The first part of the study involved evaluating the level of resources and the scope of development of their characteristics (analysed in accordance with VRIN/VRIO frameworks) in the firms surveyed. The evaluation was done on an ordinal scale ranging from 1 (much worse than competitors) to 7 (much better than competitors). The results indicate that the respondents rate the level of resources in their companies as being similar to that possessed by their main competitors (a mean score of 4.66), with a higher rating given to intangible (a mean of 4.79), rather than tangible assets (a mean of 4.33). The rating of the level of resources is statistically significantly dependent on the size of the firms under study, however the value of correlation coefficient points to a low strength of that dependence, $r_s (N = 356) = 0.28, p < 0.01$.

Among the resources which received higher ratings, the respondents identified intangible assets, such as: human resources, including competences and experience of the owners, managers and employees (a mean of 5.04), relational resources, including the ties and contacts established with the environment (a mean of 4.99), and market resources, including the brand of products and services, goodwill, or information concerning the market (a mean of 4.86). On the other hand, the characteristics of resources in the firms surveyed were rated higher than those possessed by their competitors (a mean of 4.95). The respondents primarily emphasized their non-substitutability (a mean of 5.34), and a high level of organization of the company enabling effective use of resources in the processes of company's development (a mean of 5.23).

Thus, the results fully reflect the specific nature of small business which is characterized by significant limitations, especially with regard to tangible assets (Anderson, Ullah, 2014; Corradini *et al.*, 2016). The competitive advantage is primarily built upon behavioural, market and network advantages (González-Benitoa *et al.*, 2016), and the level and conditions of development of competencies are concentrated mainly in the owner, considerably affecting the business performance of SME sector companies (Mitchelmore, Rowley, 2010).

Next, the level of development of dynamic capabilities in SMEs was analysed and evaluated. The evaluation was done on an ordinal scale ranging from 1 (much worse than competitors) to 7 (much better than competitors). The results indicate that the dynamic capabilities in the analysed sample are developed to a level similar to that seen in competitors (a mean of 4.62), with the level of development slightly growing as the size of the firm increases, $r_s (N = 356) = 0.18, p < 0.01$. The following dynamic capabilities were rated as better developed: ability to identify and assess opportunities and market risks (a mean of 4.86), ability to quickly mobilize resources and seize the market opportunities (4.75), ability to configure and coordinate resources to enable implementation of the firm's strategic goals (a mean of 4.67). The lowest ratings were given to the ability to acquire resources from external sources (a mean of 4.39), which is connected with the limited resources of the firms surveyed, especially financial resources (whose level received the lowest rating among all resources held by the firms under study, with a mean score of 4.21).

Based on the respondents' opinions, an analysis was performed concerning the importance of dynamic capabilities for shaping the resource potential of the SMEs surveyed. The following synthetic indicators were used in the analyses:

- level of resources at the disposal of the firms surveyed (7 items, alpha Cr.= 0.86), including the level of tangible assets (2 items, alpha Cr.= 0.77) and intangible assets (5 items, alpha Cr.= 0.82),
- development of characteristics of resources held by the firms surveyed in accordance with the VRIN/VRIO frameworks (5 items, alpha Cr.= 0.82),
- level of development of dynamic capabilities in the firms surveyed (8 items, alpha Cr.= 0.92).

An analysis of interdependences between the variables reveals that there is a statistically significant strong dependence between the level of resources held by the firms under study, and the level of development of dynamic capabilities, $r_{xy} (N = 356) = 0.68, p < 0.01$. At the same time, the use of dynamic capabilities has a slightly stronger impact on the development of tangible assets, $r_{xy} (N = 356) = 0.63, p < 0.01$ compared with intangible assets, $r_{xy} (N = 356) = 0.59, p < 0.01$ in the firms under study. The commitment of enterprises to the development of dynamic capabilities has a strong statistically significant impact on the development of characteristics of resources that create the SMEs' competitive advantage in line with the VRIN/VRIO frameworks, $r_{xy} (N = 356) = 0.60, p < 0.01$. The results demonstrate a significant role of dynamic capabilities in shaping the resource potential of the SMEs surveyed, which fully verifies the adopted research hypotheses H1 and H2.

Further analyses focused on determining the specific configuration of dynamic capabilities that is crucial to shaping the resource potential of the enterprises under study. To this end, the multiple linear regression analysis was applied which verified two research models. In model A, the level of resources held by the SMEs under examination was adopted as the dependent variable, and in model B - the level of development of characteristics of resources in accordance with the VRIN/VRIO frameworks was the dependent variable. The obtained ratings of use of dynamic capabilities in the SMEs under study were adopted as the independent variables. Additionally, the analysis included control variables which were divided into two groups: (1) variables related to the characteristics of the companies under examination and (2) variables related to the respondents' profiles. Results of the analysis are shown in Table 1.

The results obtained for model A have identified a set of 6 dynamic capabilities which are crucial to shaping the level of resources of SME sector companies. A key role in this configuration belongs to the ability to identify and assess market opportunities, which is an important component of entrepreneurial orientation and stimulates the market performance of small businesses (Rauch *et al.*, 2009). Second in terms of importance are the dynamic capabilities directed inside the company, related to renewing and protecting the company's resource base. The third group involves the dynamic capabilities aimed at transforming the resources, including mobilizing, reconfiguring and adapting the resources to the changing market conditions, as well as flexible strengthening and augmentation of the resource base depending on the firm's current and projected needs. The results are therefore consistent with the findings of the studies by D.G. Sirmon and M.A. Hitt (2003) who have demonstrated that the key to creating a competitive advantage lies in the correct resource management which primarily involves resource bundling and resource leveraging.

The size of an enterprise also has a considerable impact on the level of resources, which explains the statistically significant differences in the ratings of resource levels in companies of various sizes. This is in

line with the diversification trend in research on the nature of small business (Torres, 2003) and confirms the differences existing especially between micro companies, and small and medium-sized enterprises (Rutherford *et al.*, 2001). The findings also indicate that women more strongly than men perceive the influence of dynamic capabilities on the level of resources of the economic operators under study. This confirms the differences in the ratings of resource potential by respondents of different genders, which were observed in previous studies (Hughes *et al.*, 2012).

Table 1: Analysis of the importance of dynamic capabilities for shaping the resource potential of the SME sector companies under study

Variable		Model A	Model B
Dependent variable:		Level of resources	Development of characteristics of resources
Independent variables	Ability to identify and assess market opportunities	0.20** (0.05) [0.23]	0,03 (0,06) [0,03]
	Ability to mobilize resources	0.14* (0.05) [0.16]	0,13 (0,06) [0,14]
	Ability to reconfigure and adapt resources	0.12* (0.05) [0.14]	0.00 (0.07) [0.00]
	Ability to renew the firm's resource base	0.16** (0.05) [0.21]	0.16** (0.06) [0.20]
	Ability to protect resources	0.16** (0.05) [0.20]	0.17** (0.06) [0.19]
	Ability to reconfigure and coordinate resources	0.00 (0.05) [0.00]	0.07 (0.07) [0.08]
	Ability to acquire resources	0.01 (0.04) [0.01]	-0.02 (0.05) [-0.02]
	Ability to strengthen and augment resources	0.13** (0.05) [0.17]	0.10 (0.06) [0.12]
Control variables	Size of the company	0.16* (0.06) [0.11]	0.07 (0.08) [0.05]
	Range of market operations	0.03 (0.04) [0.03]	0.06 (0.05) [0.06]
	Age of the company	0.05 (0.03) [0.08]	0.01 (0.04) [0.01]
	Level of technological advancement	-0.03 (0.08) [-0.01]	0.29** (0.10) [0.13]
	Position of the respondent	-0.03 (0.06) [-0.02]	-0.04 (0.07) [-0.03]
	Gender of the respondent	-0.16* (0.08) [-0.08]	-0.03 (0.09) [-0.02]
	Age of the respondent	0.02 (0.04) [0.02]	0.07 (0.05) [0.07]
	Respondent education level	0.11 (0.09) [0.05]	0.11 (0.11) [0.04]
Constant		1.02** (0.39)	0.91 (0.48)
Observations		356	356
R2 / R2 corrected		0.54 / 0.52	0.42 / 0.39
F-stat		24.78**	15.32**

Multiple linear regression analysis. Standard errors in parentheses, standardized coefficients in square brackets. * significant at 0.05; ** significant at 0.01.

Source: Own work based on survey results.

The results obtained for model B have identified a two-component set of dynamic capabilities which significantly affect the development of the desirable attributes of resources in accordance with the VRIO/VRIN frameworks. The configuration includes the ability to renew the resource base according to the current and future trends, and protect the resources held by the company. The development of resource characteristics is also statistically significantly determined by the level of technological advancement of SMEs, and is higher in enterprises operating in advanced technology sectors, such as IT, telecommunications, research and development, pharmaceutical industry, or production of musical instruments. This is essentially supported by the results of previous observations according to which the resources held by high-tech companies, usually operating in a turbulent market environment, are characterized by a higher degree of uniqueness arising from the combining and recombining of the firm's future resources, capabilities and activities (Vladimirov *et al.*, 2013).

Thus, the regression analysis has verified the accuracy of hypothesis H3. At the same time, both models under investigation have proved to be statistically significant. The fit of model A measured by the coefficient of determination R indicates that the adopted set of predictors accounts for over 50% of variability of the resource level in the companies under study, which should be viewed as an extremely valuable research

result. The fit of model B is slightly lower, i.e. about 40%. Given the complexity of the theoretical constructs considered in this study, and the fact that they are determined by many unmeasurable or hard-to measure variables, as well as considering the relatively low level of standard errors, the fit of this model should be regarded as adequate.

5. Limitations and Future Directions for Research

When considering the cognitive and application value of the formulated conclusions, one should take into account the limitations involved in the research (Geletkanycz, Tepper, 2012). They include primarily the methodological constraints associated with the use of the inductive approach (Popper, 2005), and cross-sectional studies which do not take account of the changes occurring over time in a particular economic operator (Bryman, Bell, 2015). The constraints also arise from the use of survey research and the technique of electronic survey (Wright, 2005; Fink, 2013). Although effort was made to formulate the survey questions in the most precise and unambiguous manner possible, it can be assumed that some of the questions were misunderstood by the respondents and their ratings are highly subjective.

At the same time, the importance of the subject matter points to the need for continuing the research to achieve in-depth results concerning the impact of dynamic capabilities on the development of small business resource potential. Interesting directions of research include: identification and assessment of external factors shaping the resource potential of SMEs, and the search for new categories of capabilities and skills determining the development of characteristics of resources that create the competitive advantage of small business. At the level of methodology, an interesting approach would be to employ the triangulation method (Myers, 2013) which seeks to achieve additional cognitive and application results by a synergistic combination of quantitative and qualitative research findings (case studies).

6. Conclusions

The analyses performed in this study have demonstrated that dynamic capabilities to a significant extent shape the resource potential of small business, including both the level of available resources, and the development of desirable characteristics of resources that create a competitive advantage. Of key importance here is the appropriate configuration of dynamic capabilities adapted to the specific nature of SME sector companies. This means that SMEs need to focus on developing selected, defined dynamic capabilities which primarily include the entrepreneurial ability to identify and assess market opportunities, protect and renew the resource base, and mobilize, transform, reconfigure and adapt the resources to the firm's current and future needs.

The studies have also shown that certain dynamic capabilities, such as the ability to configure and coordinate resources to achieve the firm's strategic goals, and the ability to acquire resources from external sources have no significant impact on the development of small business resource potential. The restricted importance of the first of those capabilities results, on the one hand, from the relatively small size of SMEs and the associated easier coordination and configuration of the resource base, and on the other hand from the limited scope and horizon of strategic planning in the smallest economic operators. The limited importance of the latter capability is related to the considerable resource shortages (especially financial shortages) and the small bargaining power of SMEs which makes it difficult for those firms to acquire resources from external sources.

Simultaneously, the findings are indicative of an incorrect allocation of commitment in the development of dynamic capabilities in the companies under study. The companies unnecessarily strengthen their ability to configure and coordinate resources (it is one of the best developed dynamic capabilities) and, at the same time, are insufficiently committed to renewing and protecting the resource base they possess. Therefore, changes in the allocation of activities aimed at developing dynamic capabilities are recommended, and should contribute to both raising the level of resources, and developing the desirable attributes of resources in SME sector companies. In the long term, this should translate into permanent strengthening of the competitive advantage of small businesses and improvement of their business performance.

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8. References

- [1] L. Alpkın, C. Yılmaz, and N. Kaya. Market Orientation and Planning Flexibility in SMEs. Performance Implications and an Empirical Investigation. *International Small Business Journal*. 2007. **25** (2): 152-172.
- [2] A.R. Anderson, and F. Ullah. The Condition of Smallness: How What it Means to be Small Deters Firms from Getting Bigger. *Management Decision*. 2014. **52** (2): 326-349.
- [3] M. Arief, A. Thoyib, A. Sudiro, and F. Rohman. The Effect of Entrepreneurial Orientation on the Firm Performance through Strategic Flexibility: A Study on the SMEs Cluster in Malang. *Journal of Management Research*. 2013. **5** (3): 44-62.
- [4] C.E. Bannier, and S. Zahn. Are SMEs Large Firms in Miniature? Evidence from the Growth of German SMEs. *International Journal of Entrepreneurship and Small Business*. 2012. **17** (2): 220-248.
- [5] J.B. Barney, and W. Hesterly. *Strategic Management and Competitive Advantage: Concepts and Cases*. Pearson Education Limited, 2015.
- [6] J.B. Barney. Firm Resources and Sustained Competitive Advantage. *Journal of Management*. 1991. **17** (1): 99-120.
- [7] I. Barreto. Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. *Journal of Management*. 2010. **36** (1): 256-280.
- [8] M. Bettiol, E. Di Maria, and V. Finotto. Marketing in SMEs: the Role of Entrepreneurial Sensemaking. *International Entrepreneurship and Management Journal*. 2012. **8** (2): 223-224.
- [9] A. Bhattacharjee. *Social Science Research: Principles, Methods, and Practices*. University of South Florida Scholar Commons, Textbooks Collection, Book 3, 2012.
- [10] J.H. Block, C.O. Fisch, A. Hahn, and P.G. Sandner. Why do SMEs File Trademarks? Insights from Firms in Innovative Industries. *Research Policy*. 2014. **44** (10): 1915-1930.
- [11] A. Bryman, and E. Bell. *Business Research Methods*. Oxford University Press, Oxford 2015.
- [12] M. Callegaro, K.L. Manfreda, and V. Vehovar. *Web Survey Methodology*. Sage Publications, London 2015.
- [13] J. Cohen. A power primer. *Psychological Bulletin*. 1992. **112** (1): 155-159.
- [14] C. Corradini, P. Demirel, and G. Battisti. Technological Diversification within UK’s Small Serial Innovators. *Small Business Economics*. 2016. **47** (1): 163-177.
- [15] L.J. Cronbach. Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*. 1951. **16** (3): 297-334.
- [16] European Commission. *User guide to the SME Definition*. Publications Office of the European Union, Luxembourg 2015.
- [17] E. Fernández, J.M. Montes, and C.J. Vázquez. Typology and Strategic Analysis of Intangible Resources: A Resource-Based Approach. *Technovation*. 2000. **20** (2): 81-92.
- [18] A. Field. *Discovering Statistics Using IBM SPSS Statistics*. SAGE Publications, London 2013.
- [19] A. Fink. *How to Conduct Surveys: a Step-By-Step Guide*. Sage Publications, Thousand Oaks 2013.
- [20] M. Geletkanycz, and B.J. Tepper. From the Editors: Publishing in AMJ - part 6: discussing the implications. *Academy of Management Journal*. 2012. **55** (2): 256-260.
- [21] Ó. González-Benito, P.A. Muñoz-Gallego, and E. García-Zamoraa. Role of Collaboration in Innovation Success: Differences for Large and Small Businesses. *Journal of Business Economics and Management*. 2016. **17** (4): 645-662.
- [22] R.W. Griffin. *Fundamentals of Management*. Cengage Learning, Boston 2016.
- [23] C.E. Helfat. *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Blackwell Publishing, Malden 2007.

- [24] C.W.L. Hill. and G.R. Jones. *Strategic Management: An Integrated Approach*. Cengage Learning. Mason 2012.
- [25] K.D. Hughes. J.E. Jennings. C. Brush. S. Carter. and F. Welter. Extending Women's Entrepreneurship Research in New Directions. *Entrepreneurship Theory and Practice*. 2012. **36** (3): 429-442.
- [26] Y.Y. Kor. J.T. Mahoney. and S.C. Michael. Resources. Capabilities and Entrepreneurial Perceptions. *Journal of Management Studies*. 2007. **44** (7): 1187-1212.
- [27] A. Lanza. and M. Passarelli. Technology Change and Dynamic Entrepreneurial Capabilities. *Journal of Small Business Management*. 2014. **52** (3): 427-450.
- [28] Y. Lin. and L-Y. Wu. Exploring the Role of Dynamic Capabilities in Firm Performance under the Resource-Based View Framework. *Journal of Business Research*. 2014. **67** (3): 407-413.
- [29] T. Mazzarol. S. Reboud. and D. Clark. *In search of the 'SME Ordinaire' - Towards a Taxonomy*. 56th Annual ICSB World Conference. Stockholm 2011.
- [30] S. Mitchelmore. J. Rowley. Entrepreneurial Competencies: a Literature Review and Development Agenda. *International Journal of Entrepreneurial Behavior & Research*. 2010. **16** (2): 92-111.
- [31] M.D. Myers. *Qualitative Research in Business and Management*. SAGE Publications. London 2013.
- [32] K. Popper. *The Logic of Scientific Discovery*. Routledge Classics. London 2005.
- [33] G. Qian. A. Marcus. and L. Li. Should Small Exporting Technology Enterprises Use Niche. Strategic Alliances. or Both?. *International Journal of Management and Enterprise Development*. 2014. **13** (1): 22-23.
- [34] A. Rauch. J. Wiklund. G.T. Lumpkin. and M. Frese. Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice*. 2009. **33** (3): 761-787.
- [35] M.W. Rutherford. P. McMullen. and S. Oswald. Examining the Issue of Size and the Small Business: a Self Organizing Map Approach. *Journal of Business and Economic Studies*. 2001. **7** (2): 64-79.
- [36] S. Salunke. J. Weerawardena. and J.R. McColl-Kennedy. Towards a Model of Dynamic Capabilities in Innovation-Based Competitive Strategy: Insights from Project-Oriented Service Firms. *Industrial Marketing Management*. 2011. **40** (8): 1251-1263.
- [37] M. Sarstedt. and E. Mooi. *A Concise Guide to Market Research*. Springer-Verlag. Berlin-Heidelberg 2014.
- [38] D.G. Sirmon. and M.A. Hitt. Managing Resources: Linking Unique Resources. Management. and Wealth Creation in Family Firms. *Entrepreneurship Theory and Practice*. 2003. **27** (4): 339-358.
- [39] L. Swift. and S. Piff. *Quantitative Methods: for Business. Management and Finance*. Palgrave Macmillan. Hampshire 2014.
- [40] D. Teece. and G. Pisano. The Dynamic Capabilities of Firms: an Introduction. *Industrial and Corporate Change*. 1994. **3** (3): 537-556.
- [41] D.J. Teece. G. Pisano. and A. Shuen. Dynamic Capabilities and Strategic Management. *Strategic Management Journal*. 1997. **18** (7): 509-533.
- [42] D.J. Teece. *Dynamic Capabilities and Strategic Management*. Oxford University Press. Oxford 2009.
- [43] D.J. Teece. Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance. *Strategic Management Journal*. 2007. **28** (13): 1319-1350.
- [44] D.J. Teece. The Foundations of Enterprise Performance: Dynamic and Ordinary Capabilities in an (Economic) Theory of Firms. *Academy of Management Perspectives*. 2014. **28** (4): 328-352.
- [45] O. Torrès. Thirty Years of Research into SMEs: A Field of Trends and Counter-Trends. *Cahiers de Recherche* 2003. **6**: 5-38.
- [46] Z. Vladimirov. R. Ganeva-Simeonova. and K. Ganev. Significance of Globalization-Specific Factors for SME Competitiveness: a Conceptual Model and an Empirical Test. *Business Systems Review*. 2013. **2** (3): 1-25.
- [47] E. Webster. and P.H. Jensen. Investment in Intangible Capital: An Enterprise Perspective. *The Economic Record*. 2006. **82** (256): 82-96.

- [48] K.B. Wright. Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research. Online Questionnaire Authoring Software Packages. and Web Survey Services. *Journal of Computer-Mediated Communication*. 2005. **10** (3).