PEOPLE: International Journal of Social Sciences
ISSN 2454-5899

Marek Matejun, 2017

Vol. 3, No.1, pp. 80 - 100

Date of Publication: 08th November, 2017

DOI-https://dx.doi.org/10.20319/pijss.2017.31.80100

This paper can be cited as: Matejun, M. (2017). The Effect of Innovative Potential on Small Business Performance. PEOPLE: International Journal of Social Sciences, 3(2), 80-100.

THE EFFECT OF INNOVATIVE POTENTIAL ON SMALL BUSINESS PERFORMANCE

Marek Matejun
Department of Management, Faculty of Organization and Management, Lodz University of Technology, Lodz, Poland
matejun@p.lodz.pl

Abstract

The aim of the paper is to describe and identify the level of innovative potential of micro, small and medium-sized enterprises (SMEs) and to assess its impact on small business performance. Three research questions were formulated. The author's empirical research in the form of a survey conducted on a sample of 1,741 SMEs in the European Union Member States served the aim of the paper. The measurements were based on an original synthetic index of small business innovative potential (6 items, alpha Cr. = 0.841) structured with respect to three areas: the social area, the area of the company's creative competencies and the area of business opportunities. The results obtained indicate a moderate level of innovative potential of the surveyed companies which increases significantly as the size of the enterprises grows. The innovative potential significantly and positively influences the level of small business performance, with a stronger impact on qualitative than quantitative performance.

Keywords

Small Business, Innovation Management, Innovative Potential, Business Opportunity, Business Performance

1. Introduction

Innovative activities and innovations are considered to be a strategic prerequisite for market success of modern enterprises (Taylor & McAdam, 2004), including micro, small and medium-sized enterprises (SMEs) (Sahut & Peris-Ortiz, 2014). The results of the research conducted so far have not yielded a clear answer on the subject of the level of innovative potential of SMEs, as well as the effectiveness of their innovative activities, especially in the context of the impact of these activities on small business performance.

Based on the above, the aim of the paper is to describe and identify the level of innovative potential of micro, small and medium-sized enterprises (SMEs) and to assess its impact on small business performance. On the basis of the identified cognitive gaps, three research questions were formulated. The author's empirical research in the form of a survey carried out on a sample of 1,741 micro, small and medium-sized enterprises from 22 EU Member States served the aim of the paper and provided answers to the questions posed. The measurements were based on an original synthetic index of small business innovative potential (6 items, alpha Cr. = 0.841) structured with respect to three areas: the social area, the area of the company's creative competencies and the area of business opportunities. A synthetic index (8 items, alpha Cr. = 0.798) that allows to conduct a separate analysis of quantitative and qualitative performance was used to assess the level of small business performance.

The results obtained indicate a moderate level of SMEs' innovative potential which increases as the size of the surveyed enterprises grows, reaching a high level for small and medium-sized enterprises. The innovative potential significantly and positively influences the level of small business performance, with a stronger impact on qualitative than quantitative performance. The presented research was conducted under the research project no. 2015/17/B/HS4/00988 financed by the National Science Center, Poland.

2. Literature Review and Research Questions

Small business is a basic form of doing business in most developed and developing countries of the world. It is dominant in quantitative terms and exerts a significant influence on socioeconomic development, including macroeconomic parameters such as: creation and management of new markets, growth of gross domestic product, wealth generation, demonopolization of the economy, dynamics of international economic exchange, development

of entrepreneurial skills and capabilities, job creation and job satisfaction (Mubaraki & Aruna, 2013; McCann & Ortega-Argilés, 2016; Muller et al., 2016). The ability to conduct innovative activities and successfully implement innovations should be one of key factors in achieving these macroeconomic successes and building the competitiveness of small business (Urbancová, 2013; Aziz & Samad, 2016).

In general, innovativeness means creative activity (Hebert & Link, 2006) aimed at implementing new or significantly improved solutions and methods (Inauen & Schenker- Wicki, 2011). In process terms, it involves the creation of an idea, the development of an invention and its transformation into a successfully marketed product or service (Thornhill, 2006). Innovative activities lead to innovations that are results achieved in a certain range or area of a given company's activities, characterized by a high level of novelty and originality, as well as a significant/revolutionary impact on the social and economic environment, accepted by the company's stakeholders (Frankelius, 2009).

The results of previous research conducted worldwide do not allow a clear assessment of the effectiveness of SMEs' innovative activities. Particularly debated are the impact of these activities on small business performance, which signifies a company's ability to achieve goals and build a competitive advantage in terms of profitability, sales growth, and the achievement of key strategic goals (Hult, Hurley & Knight, 2004). Many previous studies show a significant, direct and positive relationship between innovativeness and small business performance (e.g.: Gunday et al., 2011; Gomes & Wojahn, 2017). On the other hand, the results of other studies indicate a neutral relationship (e.g.: Heunks, 1998; Kraus et al., 2012), and even identify a negative relationship between these constructs (McGee, Dowling & Megginson, 1995; Vermeulen, De Jong & O'Shaughnessy, 2005). The main causes of this ambiguity can be attributed to (Rosenbusch, Brinckmann & Bausch, 2011; Ndesaulwa & Kikula, 2016):

- Adopting different substantive foundations, a lack of unambiguous and full operationalization of the analyzed constructs, as well as the use of different terms to describe similar concepts, such as: innovativeness – innovation capacity – innovative potential and performance – efficiency – competitiveness,
- A small scope of the use of internal structuralization of the analyzed constructs, limiting the detail and depth of inference,

- Conducting research on relatively small research samples and using different measures, different research methods, and different analysis tools.

This fully justifies conducting the research presented in the paper and identifies specific research gaps that will be limited by the internal structuralization of the analyzed concepts and carrying out analyses on a large research sample, representative of the European Union area. In the framework of the analyses, substantive attention was focused on the small business innovative potential, which expresses a company's ability to identify and perceive business opportunities and effectively implement market innovations (Maravelakis et al., 2006). The analysis of this potential should take into account specific characteristics of SMEs which generally include:

- The quantitative sphere, which is defined by quantified small business criteria. An example of this approach could be the uniform, formal definition of SMEs formulated by the European Commission (2015) and used in the EU area. It defines the boundaries of the SME sector at 249 employees (FTE) and an annual turnover of EUR 50 million or an annual balance sheet total of EUR 43 million. Additionally, it takes into account percentage of capital and/or ownership ties between SMEs and other companies,
- The qualitative sphere, which is determined by specific structural characteristics of small business. The most important of these are (Schaper et al., 2014; Volery & Mazzarol, 2015): the owner's dominance in the organizational system, a small market share and concentration of business activity in niches, a simplified organizational structure, difficult access to external sources of funding, as well as focus on individual unit production and service provision.

These characteristics affect the level of small business innovative potential. Favorable characteristics include (Nicolescu, 2009; Storey & Greene, 2010): high entrepreneurship and flexibility of operation speed of decision making, and low formalization of operation. On the other hand, significant resource constraints, as well as focus on autocracy and high autonomy may limit SMEs' innovative activities. The small business innovative potential consists of specific areas whose synergistic links allow SMEs to conduct effective innovative activities. According to M. Hoq and N. Ha (2009), these include:

- Social capital orientation, encompassing a positive attitude and involvement of human and social capital in innovative activities,

- Market orientation, encompassing the ability to actively respond to market conditions and challenges, as well as to adapt innovations to the changing needs of the environment,
- Entrepreneurial orientation, encompassing a risk-taking attitude and a proactive competitive attitude of the company.

Similar components are also emphasized by other authors. In the social area, R. Mbizi et al. (2013) draw attention to the importance of the owner/manager's entrepreneurial attitude related to building an innovation orientation. Referring to the market area, they stress the need for a bold market orientation of a company based on a strategic vision of business activity and dynamic exploitation of market opportunities. The importance of an external perspective and interaction with the business environment for the development of SMEs' innovative activities is also underlined by M. Bommer and D. Jalajas (2004), as well as M. Nieto and L. Santamaría (2010). Adding to these considerations, T. Edwards, R. Delbridge and M. Munday (2005) also mention the need on the part of SMEs to take reactive measures related to adaptation to the volatility and demands of the environment, as well as proactive measures, such as anticipating market trends. M. Ahedo (2010) draws attention to the importance of a company's pro-innovation orientation, which expresses its desire for innovation, and the role of human capital management aimed at increasing employees' creativity and ingenuity. On this basis, it is possible to determine three key areas of innovative potential that take into account specific characteristics of small business:

- The social area that encompasses the owner's entrepreneurial attitude, aimed at taking on new challenges and seeking market opportunities through accepting higher levels of risk, as well as employees' creative attitudes and behavior,
- The area of creative competencies that encompasses focus on innovation implementation, understood as a desire for introducing novelties and adapting innovative activities conducted to the environment, which expresses organizational flexibility,
- The area of business opportunities that encompasses market-driven business activity characterized by focus on market opportunities and the ability to actively anticipate and stay ahead of market trends.

Adoption of the above-presented assumptions allows a more detailed assessment of SMEs' innovative potential and its impact on small business performance. In the light of the

research gaps identified above, further analyses will be aimed at answering the following research questions:

- Q1: What is the level of development of SMEs' innovative potential?
- Q2: How and to what extent does the innovative potential affect small business performance?
- Q3: Which areas of innovative potential affect most SMEs' business performance?

3. Research Methodology and Characteristics of the SMEs Surveyed

The author's own empirical research conducted as a quantitative study using the survey method (Nardi, 2016) served the aim of the paper and provided answers to the research questions. This method has been successfully used in many previous innovation management studies (Becheikh, Landry & Amara, 2006). This particular study was based on the recommendations and methodological guidelines formulated by E. Babbie (2017). Due to the significant use of the Internet and e-mail in the SME sector (Dean et al., 2012), the CSAQ – Computerized Self-Administered Questionnaire was used as the research technique (Callegaro, Manfreda & Vehovar, 2015). The research tool was an original questionnaire survey available to respondents on www.questionpro.com.

Due to the leading role of the European Union in the development of innovation on a global scale (Hollanders, Es-Sadki & Kanerva, 2016; Smits, Burtscher & Metthey, 2016), the study was conducted in 22 EU Member States: Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Lithuania, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. The research area covers more than 4 million km (more than 95% of the area of the EU) and is inhabited by nearly 500 million people (98% of the population of the EU) (The World Bank indicators, 2016). In this area, there are more than 21 million enterprises, of which over 98% are SME's (Eurostat data, 2016; the SME Performance Review data, 2016).

The study was conducted on a total sample of 1,741 SMEs. In order to determine the size of the surveyed companies, the questionnaire comprised questions directly related to the formal, uniform definition of micro, small and medium-sized enterprises in the European Union (European Commission, 2015). The respondents rated their companies from the point of view of annual average full-time employment, the level of turnover and balance sheet total. In addition,

the respondents were asked about capital/ownership ties with other entities to identify the independence of the surveyed companies. As a result, it was possible to determine 1,183 micro companies, 399 small companies and 159 medium-sized companies. The surveyed companies:

- Operate mainly in the form of individual companies (44.5), less often in the form of limited liability companies (35.3%), private partnerships (13.3%) and joint stock companies (5.5%),
- Are generally relatively mature companies, active in the market for more than 20 years (36.2%). Companies with a business life span of 10 to 20 years make up 31.3% of the sample, while companies active for less than 10 years comprise 32.5% of the sample,
- Indicate business activity in the service sector (59.9%) as their core market activity, less often business activity conducted in the manufacturing sector (20.9%) and the trade sector (19.2%),
- Are most active in domestic markets (38.8%). 26.6% of the surveyed companies operate in local and regional markets, while companies active in foreign markets account for 34.6% of the sample.

The surveyed companies were evaluated on the basis of observations and opinions of the respondents who were owners (74%), senior managers (19%) or employees authorized and legitimized by the management to participate in the research (7%). The questions were answered mostly by men (70%), aged 31 to 40 years (30%) or over 50 years (35.5%), with higher education (81%), technical education (40%) or economic/management education (26%).

Statistical analysis of the empirical material collected was conducted using IBM SPSS Statistics (Field, 2014). The following statistical methods were used (Swift & Piff, 2014): location measures: mean (M), median (Mdn) and standard deviation (SD), Pearson's (r_{xy}) and Spearman's (r_s) correlation coefficients and their significance tests, as well as multiple linear regression analysis. To measure key variables, the VAS – Visual Analogue Scale was used (Reips & Funke, 2008). The level of reliability of the adopted measurement scales was measured with the use of Cronbach's alpha coefficient (Cronbach & Shavelson, 2004), for which an acceptable level in a range from 0.7 to 0.9 was adopted. To assess the strength of the interdependence between the phenomena, an approach based on the proposal formulated by J. Cohen (1992) was used, taking as linear correlation coefficient value thresholds the following levels: 0.1 – weak; 0.3 – medium; 0.5 – strong, 0.7 – very strong.

4. Research Results

The first part of the study assessed the level of innovative potential of the companies surveyed. An original, synthetic index based on 6 items expressing the dimensions identified in the theoretical part of the paper was used. Selected items concerned: (1) the owner's entrepreneurship, (2) creativity of employees; (3) focus on innovation as one of the main directions of activities undertaken; (4) adaptability of innovative activities conducted to the environment; (5) focus on identifying and exploiting market opportunities and (6) the ability to take action in order to stay ahead of market trends. Each of the items was evaluated by the respondents on the Visual Analog Scale ranging from 0 (does not apply to my company) to 100 (fully applies to my company). The level of reliability of the adopted scale measured with the use of Cronbach's alpha coefficient amounted to 0.841. Additionally, the construction of the index allows distinguishing 3 main areas of SMEs' innovative potential: the social area (items 1 and 2), the area of the company' creative competencies (items 3 and 4) and the area of business opportunities (items 5 and 6). The calculation results are shown in Table 1.

Table 1: *The Level of Development of the Innovative Potential and its Areas in the SMEs Surveyed*

The innovative potential of small business and its areas	**Total in the sample**		**Including the companies by size:**					
			micro		**small**		**medium**	
	M	SD	M	SD	M	SD	M	SD
Overall innovative potential, including:	58	23	56	24	60	22	66	21
• Social area	66	24	65	24	68	21	73	21
• Area of the company' creative competencies	51	28	50	28	53	27	62	28
• Area of business opportunities	57	29	55	30	59	28	63	25

Source: Own Study based on the Survey Research

The obtained results allow answering the Q1 research question: the innovative potential in the research sample is developed at a moderate level (M = 58, Mdn = 60, SD = 23). The owner's entrepreneurship (M = 70, Mdn = 79, SD = 30) and creative attitudes of employees (M = 63, Mdn = 65; SD = 27) are the main stimulant variables. The main destimulant variable is the ability to adapt innovative activities to the environment (M = 48, Mdn = 51; SD = 33), which confirms SMEs' relatively low bargaining power and their small impact on the business environment. Considering the development of the innovative potential from the perspective of particular areas, the results show that the most developed area is the social one (M = 66, Mdn =

69; SD = 24). The level of development of the innovative potential differs statistically to a small extent depending on the size of the surveyed enterprises, r_s (N = 1741) = 0.12, p < 0.01. In the case of micro companies, it is developed at a moderate level, however, in small and medium-sized enterprises it was assessed at a high level.

The next part of the study assessed the surveyed companies' business performance. A synthetic index based on the proposals formulated by G.B. Murphy, J.W. Trailer and R.C. Hill (1996), as well as A. Aragón-Sánchez and G. Sánchez-Marín (2005), was used. These authors propose operationalization of small business performance by examining at the same time two areas: the quantitative area and the qualitative area. Within the quantitative area, the company's revenue, return on investment and market share was taken into account. In the qualitative area, consideration was given to: the company's productivity, quality, ability to extend the range of products and services, teamwork and involvement in socially responsible activities. As a result, the synthetic index used included 8 items that were assessed in reference to the surveyed companies' major competitors (based on Koh et al., 2007). For the measurement, the VAS was used in the range from 0 (much worse than competitors) to 100 (much better than competitors). The level of reliability of the adopted scale measured with the use of Cronbach's alpha coefficient amounted to 0.798. The construction of the index also allowed the addition of two sub-variables: quantitative and qualitative small business performance, which enabled a more detailed empirical analysis of the substantive interdependence discussed in the paper.

The results show that the companies surveyed assessed the level of business performance at a relatively high level (M = 61; Mdn = 62; SD = 16). Quantitative small business performance (M = 49; Mdn = 51; SD = 19) is assessed at a considerably lower level, t(1740) = -40.59, p < 0.01, than qualitative small business performance (M = 68; Mdn = 69; SD = 18). Quantitative small business performance is stimulated at a similar level by the level of turnover (M = 54; Mdn = 52; SD = 21) and return on investment (M = 55; Mdn = 53; SD = 24). The destimulant variable in this case is a relatively small market share (M = 40; Mdn = 41; SD = 26), which is one of the basic characteristics of small business (Storey, 2016). The main stimulant variable of qualitative small business performance is high quality of products and services (M = 77; Mdn = 81; SD = 19). Within this area, teamwork ranked at a relatively lowest level (M = 63; Mdn = 67; SD = 27), and all the qualitative small business performance indicators were rated on average over 60 points on the adopted scale, as shown in Table 2.

Table 2: *The Level of Business Performance and its Areas in the Surveyed SMEs*

Small business performance and its areas:	Total in the sample		Including the companies by size:					
			micro		small		medium	
	M	SD	M	SD	M	SD	M	SD
Overall business performance including:	61	16	60	16	63	15	66	15
• quantitative business performance	49	19	47	19	52	18	58	18
• qualitative business performance	68	18	68	18	70	17	71	17

Source: Own Study based on the Survey Research

In the next part of the study, the impact of the innovative potential and its areas on the level of small business performance was assessed. The interdependence analysis shows that there are significant relationships of moderate intensity between the phenomena, with the intensity reaching almost a strong level. The results of the correlation analysis between the variables considered are presented in Table 2.

Table 3: *The Analysis of the Correlation between the Innovative Potential and Business Performance in the Surveyed SMEs*

Variables	Overall innovative potential	Social area	Area of the company' creative competencies	Area of business opportunities
Overall business performance	0.48**	0.45**	0.41**	0.40**
Quantitative business performance	0.31**	0.28**	0.24**	0.28**
Qualitative business performance	0.48**	0.45**	0.42**	0.38**

Significance test of Pearson's linear correlation coefficient.

* significant at 0.05; ** significant at 0.01.

Source: Own Study based on the Survey Research

Multiple linear regression analysis was used to in-depth assess the impact of the innovative potential on the surveyed companies' business performance. The first analyses were carried out within the framework of 3 models in which the following were used as independent variables: (1) overall business performance, (2) quantitative business performance, and (3) qualitative business performance. The level of innovative potential was adopted as the main dependent variable. The analyzed models also included control variables covering characteristics

of the surveyed companies and characteristics of the respondents. The results of the analysis are presented in Table 4.

Table 4: *The Impact of the Innovative Potential on Business Performance of the SMEs Surveyed*

Variable	Model 1	Model 2	Model 3
Independent variable:	Business performance	Quantitative performance	Qualitative performance
Innovative potential	**0.00** (0.00) [0.48]**	**0.00** (0.00) [0.30]**	**0.00** (0.00) [0.48]**
Company size	**0.01* (0.01) [0.06]**	**0.04** (0.01) [0.13]**	0.00 (0.01) [0.00]
Company age	**0.01** (0.00) [0.06]**	**0.01** (0.00) [0.08]**	**0.00* (0.00) [0.04]**
Sector of operation	0.00 (0.00) [-0.01]	0.00 (0.01) [-0.01]	0.00 (0.01) [0.00]
Scope of operation	0.00 (0.00) [0.02]	0.00 (0.00) [-0.01]	0.00 (0.00) [0.03]
Respondent's position	0.00 (0.01) [-0.01]	0.00 (0.01) [-0.01]	0.00 (0.01) [-0.01]
Respondent's gender	-0.01 (0.01) [-0.02]	0.00 (0.01) [0.01]	-0.01 (0.01) [-0.03]
Respondent's age	0.00 (0.00) [-0.02]	**-0.02** (0.00) [-0.09]**	0.01 (0.00) [0.04]
Respondent's educational background	0.01 (0.01) [0.04]	0.00 (0.01) [0.01]	**0.01* (0.01) [0.04]**
Constant	0.39** (0.02)	0.32** (0.03)	0.43** (0.03)
Observations	1741	1741	1741
R^2 / R^2 corrected	0.24 / 0.24	0.13 / 0.12	0.24 / 0.23
F-stat	62.03**	27.56**	59.65**

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

Source: Own Study based on the Survey Research

The results indicate that all the three models have proven to be statistically significant, which provides an answer to the research question Q2: the innovative potential in all the analyzed cases influences significantly, positively and to the greatest extent (in relation to the other variables) small business performance, in quantitative as well as qualitative terms. They also confirm the correlation analysis results indicating that the innovative potential affects more strongly qualitative performance (approx. 60%) than quantitative performance.

The results also indicate that small business performance is shaped significantly and positively by the size and age of the companies surveyed. This is confirmed by the results of many previous studies which demonstrated a positive impact of company size on small business performance, especially on quantitative and financial performance (Ozgulbas, Koyuncugil & Yilmaz, 2006; Serrasqueiro & Nunes, 2008; Liargovas & Skandalis, 2010; Kuncová, Hedija & Fiala, 2016). This relationship stems primarily from a greater resource potential and the possibility of the use of economies of scale in the management of larger firms. The positive

impact of company age on business performance is explained by increased market experience, developed organizational learning, extensive cooperation networks and relations with financial institutions (Radipere & Dhliwayo, 2014; Kuncová, Hedija & Fiala, 2016). Thus, this factor generates a number of benefits, not only quantitative but also qualitative ones, which results in a significant impact on quantitative as well as qualitative small business performance.

In the framework of the analysis, positive effects of education on qualitative small business performance and a negative impact of the respondents' age on quantitative small business performance were also identified. Since the respondents were mostly owners of the companies surveyed, this confirms a positive impact of the entrepreneurs' demographic and educational characteristics on SMEs' business performance (Simpson, Tuck & Bellamy, 2004; Doms, Lewis & Robb, 2010; Blackburn, Hart & Wainwright, 2013).

The fit of the model 1 and 3 measured with the use of the coefficient of determination indicates that approx. 25% of the variance of business performance in total and qualitative business performance is explained by the adopted set of predictors, including in particular the level of innovative potential. Taking into consideration high complexity and multi-dimensionality of the analyzed variables, this result can be considered satisfactory. A significantly lower level of fit was obtained in the case of model 2, which confirms that the impact of the innovative potential on quantitative small business performance is weaker and less clear.

In the last part of the study, the impact of the innovative potential areas on the level of small business performance was assessed. Multifactorial regression analysis was used, conducted in the framework of 3 successive models in which the following independent variables were adopted: (4) overall business performance, (5) quantitative business performance, and (6) qualitative business performance. The assessment of individual dimensions of SMEs' innovative potential was adopted as independent variables. As this analysis is derived from the above-presented analyses, these models did not include control variables. The results are provided in Table 5.

Table 5: *The Impact of the Innovative Potential on Business Performance of the SMEs Surveyed*

Variable	Model 4	Model 5	Model 6
Independent variable:	Business performance	Quantitative performance	Qualitative performance
Social area	**0.00** (0.00) [0.28]**	**0.00** (0.00) [0.17]**	**0.00** (0.00) [0.29]**
Area of the company's creative competencies	**0.00** (0.00) [0.16]**	0.00 (0.00) [0.04]	**0.00** (0.00) [0.20]**
Area of business opportunities	**0.00** (0.00) [0.13]**	**0.00** (0.00) [0.16]**	**0.00** (0.00) [0.08]**
Constant	0.41** (0.01)	0.33** (0.01)	0.45** (0.01)
Observations	1741	1741	1741
R^2 / R^2 corrected	0.25 / 0.25	0.10 / 0.10	0.24 / 0.24
F-stat	184.80**	64.57**	185.24**

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

Source: Own Study based on the Survey Research

All the three considered models proved to be statistically significant, which allows to answer the research question Q3: the social area, which is determined by the level of the owner's entrepreneurial attitude and activity as well as employees' creative behavior, has the greatest impact on the level of small business performance. A detailed analysis also allowed to identify the causes of a limited impact of the innovative potential on quantitative small business performance. It turns out that one of its areas (the area of the company's creative competencies) does not significantly affect the level of qualitative business performance, which limits the strength of the identified interdependence. This may be due to incurring significant financial investment (and more widely: resource investment) on creative and innovative activities conducted, which limits financial performance, resulting in the deterioration of quantitative small business performance. Another cause may be a relatively low degree of use of economies of scale in SMEs' activities. As a result, implemented innovations are often one-off, niche activities that generate less revenue and profits than their massive counterparts deployed in large enterprises.

5. Limitations and Directions of Further Research

When considering the results obtained and formulating conclusions on their basis, limitations of the research should be considered (Geletkanycz & Tepper, 2012). They stem primarily from the use of inductive research approach (Popper, 2005), as well as the use of

online survey research as the research method (Wright, 2005). These limitations are related to the inability to include the entire population of SME companies in the European Union in the research sample, as well as to the fact that the obtained empirical material is characterized by high levels of subjectivity of the answers provided by the respondents. A diverse perception of the issues analyzed in the study is also a methodical challenge. Despite the fact that the questions in the survey questionnaire were formulated in the most precise and unambiguous manner, it still can be assumed that some of the questions were erroneously or improperly understood by the respondents.

The importance of the issues considered for shaping small business performance indicates the need for the continuation of the research. The analysis of the impact of resource investment incurred on innovative activities on quantitative small business performance and financial performance studied in different time perspectives can be part of further research topics that may be of scientific interest. It is also worth carrying out methodological work aimed at the improvement and expansion of operationalization dimensions of the innovative potential and small business performance in order to obtain more accurate results and a higher level of fit of the models considered. Empirical studies will be conducted within the framework of the currently implemented international research project and should become a source of new cognitive conclusions and applications.

6. Conclusions and Answers to the Research Questions

The theoretical considerations presented in the paper indicate an important role of the innovative potential in building market success of micro, small and medium-sized enterprises by strengthening their small business performance. The innovative potential is seen as a complex construct of synergistic focus of the company's social potential, creative competencies and its ability to exploit market opportunities on the success of implemented innovations and innovative solutions. Due to increasing dynamics of the business environment, growing expectations of stakeholders and the importance of managing the allocation of scarce resources to key activities, the ability to implement progress and innovation becomes one of key factors shaping business performance of modern SME companies. This is confirmed by the results of the survey conducted on a sample of 1,741 micro, small and medium-sized enterprises from the European Union which provide answers to the following research questions:

- Q1: What is the level of development of SMEs' innovative potential? The level of development of the surveyed SMEs' innovative potential is moderate, and it increases with the size of the companies to reach a high level for small and medium-sized ones,
- Q2: How and to what extent does the innovative potential affect small business performance? The innovative potential significantly and positively influences the development of small business performance, affecting more strongly qualitative performance than quantitative performance,
- Q3: Which areas of innovative potential affect most SMEs' business performance? Small business performance is significantly influenced by three areas of innovative potential: the social area, the area of innovative competencies and the area of business opportunities, with the strongest impact identified in the case of the social area, related to the owner's entrepreneurship and creativity of company employees.

The results obtained allow to draw new, extended conclusions in the framework of discussion on effectiveness and efficiency of SME's innovative activities (Lin & Chen, 2007; Rosenbusch, Brinckmann & Bausch, 2011). Their cross-sectional nature and a large research sample allow establishing and confirming a positive impact of the innovative potential on small business performance. At the same time, the research results draw attention to the internal structuralization of SMEs' innovative potential by explaining its varied effects on small business quantitative and qualitative performance. They also show that SMEs do not use their full social potential and responsiveness to market opportunities which should be aimed more increasingly at the development of companies' innovative competencies. The research will continue in the framework of quantitative analyses as well as qualitative ones (case studies), and will certainly provide further, in-depth cognitive conclusions and applications.

References

Ahedo, M. (2010). Exploring the innovative potential of SMEs in Spain. *Transfer: European Review of Labour and Rese*arch, 16(2), 197-209. https://doi.org/10.1177/1024258910364307

Al-Mubaraki, H., & Aruna, M. (2013). Technology Innovation for SME Growth: A Perception for the Emerging Economies. *Journal of Economics and Sustainable Development*, 4(3), 156-162.

Aragón-Sánchez, A., & Sánchez-Marín, G. (2005). Strategic orientation, management characteristics, and performance: a study of Spanish SMEs. *Journal of Small Business Management*, 43(3), 287-308. https://doi.org/10.1111/j.1540-627X.2005.00138.x

Aziz, N.N.A., & Samad, S. (2016). Innovation and competitive advantage: Moderating effects of firm age in foods manufacturing SMEs in Malaysia. *Procedia Economics and Finance*, 35, 256-266 https://doi.org/10.1016/S2212-5671(16)00032-0

Babbie, E. (2017). *The basics of social research*. Boston: Cengage Learning. https://doi.org/10.1007/s11205-016-1307-4

Becheikh, N., Landry, R., & Amara, N. (2006). Lessons from innovation empirical studies in the manufacturing sector: A systematic review of the literature from 1993–2003. *Technovation*, 26(5-6), 644-664. https://doi.org/10.1016/j.technovation.2005.06.016

Blackburn, R.A., Hart, M., & Wainwright, T. (2013). Small business performance: business, strategy and owner- manager characteristics. *Journal of Small Business and Enterprise Development*, 20(1), 8-27. https://doi.org/10.1108/14626001311298394

Bommer, M., & Jalajas, D.S. (2004). Innovation sources of large and small technology-based firms. *IEEE Transactions on Engineering Management*, 51(1), 13-18. https://doi.org/10.1109/TEM.2003.822462

Callegaro, M., Manfreda, K.L., & Vehovar, V. (2015). *Web survey methodology*. London: Sage Publications.]

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. https://doi.org/10.1037/0033-2909.112.1.155

Cronbach, L.J., & Shavelson, R.J. (2004). My current thoughts on coefficient alpha and successor procedures. *Educational and Psychological Measurement*, 64(3), 391-418. https://doi.org/10.1177/0013164404266386

Dean, D., Digrande, S., Field, D., Lundmark, A., O'Day, J., Pineda, J., & Zwillenber, P. (2012). *The connected world. The internet economy in the G-20*. Boston: The Boston Consulting Group.

Doms, M., Lewis, E., & Robb, A. (2010). Local labor force education, new business characteristics, and firm performance. *Journal of Urban Economics*, 67(1), 61–77. https://doi.org/10.1016/j.jue.2009.10.002

Edwards, T., Delbridge, R., & Munday, M. (2005). Understanding innovation in small and medium-sized enterprises: a process manifest. *Technovation*, 25(1), 1119-1127. https://doi.org/10.1016/j.technovation.2004.04.005

European Commission. (2015). *User guide to the SME definition*. Luxembourg: Publications Office of the European Union.

Eurostat data. (2016). Eurostat. Retrieved from: http://epp.eurostat.ec.europa.eu

Field, A. (2014). *Discovering statistics using IBM SPSS Statistics*. London: SAGE Publications.

Frankelius, P. (2009). Questioning two myths in innovation literature. *Journal of High Technology Management Research*, 20(1), 40-51. https://doi.org/10.1016/j.hitech.2009.02.002

Gomes, G., & Wojahn, R.M. (2017). Organizational learning capability, innovation and performance: Study in small and medium-sized enterprises (SMES). *Revista de Administração*, 52(2), 163-175. https://doi.org/10.1016/j.rausp.2016.12.003

Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of Production Economics*, 133(2), 662-676. https://doi.org/10.1016/j.ijpe.2011.05.014

Hebert, R., and Link, A. (2006) The entrepreneur as innovator, *The Journal of Technology Transfer*, 31 (5), 589-597. https://doi.org/10.1007/s10961-006-9060-5

Heunks, F.J., 1998. Innovation, creativity and success. *Small Business Economics*, 10 (3), 263-272. https://doi.org/10.1023/A:1007968217565

Hollanders, H., Es-Sadki, N., & Kanerva, M. (2016). *European Innovation Scoreboard 2016*. Belgium: Publications Office of the European Union.

Hoq, M.Z., Ha, N.C. (2009). Innovativeness: its antecedents and relationship to SME business performance. *Proceedings of ANZMAC 2009 Conference*, Australian & New Zealand Marketing Academy, Melbourne, Australia. https://doi.org/10.2139/ssrn.1851423

Hult, G.T.M., Hurley, R.F., & Knight, G.A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, 33(5), 429-438. https://doi.org/10.1016/j.indmarman.2003.08.015

Inauen, M., & Schenker- Wicki, A. (2011). The impact of outside- in open innovation on innovation performance. *European Journal of Innovation Management*, 14(4), 496-520. https://doi.org/10.1108/14601061111174934

Koh, L., Demirbag, M., Bayraktar, E., Tatoglu, E., & Zaim, S. (2007). The impact of supply chain management practices on performance of SMEs. *Industrial Management & Data Systems*, 107(1), 103-124. https://doi.org/10.1108/02635570710719089

Kraus, S., Rigtering, J.P.C., Hughes, M., & Hosman, V. (2012). Entrepreneurial orientation and the business performance of SMEs: A quantitative study from the Netherlands. *Review of Managerial Science*, 6(2), 161-182. https://doi.org/10.1007/s11846-011-0062-9

Kuncová, M., Hedija, V., & Fiala, R. (2016). Firm size as a determinant of firm performance: The case of swine raising. *Agris on-line Papers in Economics and Informatics*, 8(3), 77-89. https://doi.org/10.7160/aol.2016.080308

Liargovas, P.G., & Skandalis, K.S. (2010). Factors affecting firms' performance: The case of Greece. *Global Business and Management Research: An International Journal*, 2(2/3), 184-197.

Lin, C.Y.Y., & Chen, M.Y.C. (2007). Does innovation lead to performance? An empirical study of SMEs in Taiwan. *Management Research News*, 30(2), 115-132. https://doi.org/10.1108/01409170710722955

Maravelakis, E., Bilalis, N., Antoniadis, A., Jones, K.A., & Moustakis, V. (2006). Measuring and benchmarking the innovativeness of SMEs: A three-dimensional fuzzy logic approach. *Production Planning & Control*, 17(3), 283-292. https://doi.org/10.1080/09537280500285532

Mbizi, R., Hove, L., Thondhlana, A., & Kakava, N. (2013). Innovation in SMEs: A review of its role to organisational performance and SMEs operations sustainability. *Interdisciplinary Journal of Contemporary Research in Business Research*, 4(11), 370-389.

McCann, P., & Ortega-Argilés, R. (2016). Smart specialisation, entrepreneurship and SMEs: issues and challenges for a results-oriented EU regional policy. *Small Business Economics*, 46(4), 537-552. https://doi.org/10.1007/s11187-016-9707-z

McGee, J.E., Dowling, M.J., & Megginson, W.L. (1995). Cooperative strategy and new venture performance: the role of business strategy and management experience. *Strategic Management Journal*, 16(7), 565-580. https://doi.org/10.1002/smj.4250160706

Muller, P., Devnani, S., Julius, J., Gagliardi, D., & Marzocchi, C. (2016). *Annual report on European SMEs 2015/2016: SME recovery continues*. European Union: European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and

SMEs. https://doi.org/10.1183/13993003.02218-2015 https://doi.org/10.1183/13993003.01744-2016

Murphy, G.B., Trailer, J.W., & Hill R.C. (1996). Measuring performance in entrepreneurship research. *Journal of Business Research*, 36(1), 15-23. https://doi.org/10.1016/0148-2963(95)00159-X

Nardi, P.M. (2016). *Doing survey research. A guide to quantitative methods*. Abingdon: Routledge.

Ndesaulwa, A.P., & Kikula, J. (2016). The impact of innovation on performance of small and medium enterprises (SMEs) in Tanzania: A review of empirical evidence. *Journal of Business and Management Sciences*, 4(1), 1-6.

Nicolescu, O. (2009). Main features of SMEs organisation system. *Review of International Comparative Management*, 10(3), 405-413.

Nieto, M.J., & Santamaría, L. (2010). Technological collaboration: Bridging the innovation gap between small and large firms. *Journal of Small Business Management*, 48(1), 44-69. https://doi.org/10.1111/j.1540-627X.2009.00286.x

Ozgulbas, N., Koyuncugil, A.S., & Yilmaz, F. (2006). Identifying the effect of firm size on financial performance of SMEs. *The Business Review*, 6(1), 162-167.

Popper, K., *The logic of scientific discovery*. London: Routledge Classics, 2005.

Radipere, S., & Dhliwayo, S. (2014). The role of age and business size on small business performance in the South African small enterprise sector. *Problems and Perspectives in Management*, 12(4), 7-12.

Reips, U.D., & Funke, F. (2008). Interval-Level measurement with visual analogue scales in internet-based research: VAS Generator. *Behavior Research Methods*, 40(3), 699-704. https://doi.org/10.3758/BRM.40.3.699

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26(4), 441-457. https://doi.org/10.1016/j.jbusvent.2009.12.002

Sahut, J.M., & Peris-Ortiz, M. (2014). Small business, innovation, and entrepreneurship. *Small Business Economics*, 42(4), 663-668. https://doi.org/10.1007/s11187-013-9521-9

Schaper, M., Volery, T., Weber, P., & Gibson B. (2014). *Entrepreneurship and small business*. Hoboken: John Wiley & Sons.

Serrasqueiro, Z.S., & Nunes, P.M. (2008). Performance and size: Empirical evidence from Portuguese SMEs. *Small Business Economics*, 31(2), 195-217. https://doi.org/10.1007/s11187-007-9092-8

Simpson, M., Tuck, N., & Bellamy, S. (2004). Small business success factors: the role of education and training. *Education + Training*, 46(8/9), 481-491. https://doi.org/10.1108/00400910410569605

Smits, R.-J., Burtscher, W., & Metthey, J. (Eds.) (2016). *Science, research and innovation performance of the EU*. Luxembourg: Directorate-General for Research and Innovation, Publications Office of the European Union.

Storey, D.J. (2016). *Understanding the small business sector*. Abingdon: Routledge, 2016.

Storey, D.J., & Greene, F.J. (2010). *Small business and entrepreneurship*. Essex: Pearson Education Limited.

Swift, L., & Piff, S. (2014). *Quantitative methods: for business, management and finance*. Hampshire: Palgrave Macmillan https://doi.org/10.1007/978-1-137-33794-8

Taylor, J., & McAdam, R. (2004). Innovation adoption and implementation in organizations: A review and critique. *Journal of General Management*, 30(1), 17-38.

The SME Performance Review data. (2016). The European Commission. Retrieved from: https://ec.europa.eu/growth/smes/business-friendly-environment/performance-review-2016_en.

The World Bank indicators. (2016). The World Bank. Retrieved from: http://data.worldbank.org/indicator

Thornhill, S. (2006). Knowledge, innovation and firm performance in high- and low-technology regimes. *Journal of Business Venturing*, 21(5), 687-703. https://doi.org/10.1016/j.jbusvent.2005.06.001

Urbancová, H. (2013). Competitive advantage achievement through innovation and knowledge. *Journal of Competitiveness*, 5(1), 82-96. https://doi.org/10.7441/joc.2013.01.06

Vermeulen, P.A.M., De Jong, J.P.J., & O'Shaughnessy, K.C. (2005). Identifying key determinants for new product introductions and firm performance in small service firms. *Service Industry Journal*, 25(5), 625-640. https://doi.org/10.1080/02642060500100783

Volery, T., & Mazzarol, T. (2015). The evolution of the small business and entrepreneurship field: A bibliometric investigation of articles published in the International Small

Business Journal. *International Small Business Journal*, 33(4), 374-396. https://doi.org/10.1177/0266242613516139

Wright, K.B. (2005). Researching internet-based populations: advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey service. *Journal of Computer‐Mediated Communication*, 10(3). https://doi.org/10.1111/j.1083-6101.2005.tb00259.x