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OPEN INNOVATION IN THE CONTEXT OF ORGANISATIONAL STRATEGY

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ABSTRACT

The paper aims to analyse the relationship between different types of corporate strategy and open innovation in the contexts of the age, size and the operational range of enterprises. The research targeted companies in Poland that were surveyed from January to April, using traditional and electronic forms of a questionnaire. The questionnaire was developed based on a 5-point Likert scale. The level of “openness” of innovation processes in an enterprise was determined according to a 3-point scale, namely, a closed innovator, a hybrid or semi-open innovator, and an open innovator. The strategy implemented by an enterprise was classed into main three types used to achieve a competitive advantage, i.e. cost leadership, differentiation or diversification. There is a strong correlation between open innovations, the cost leadership strategy and the differentiation strategy (negative correlation). The relationship between the age, size and the range of a company and the opening of innovative processes was also observed. The research aims to fill the knowledge gap existing in the literature regarding the links between a particular type of strategy and the opening of innovation processes.

KEY WORDS

open innovations, diversification, differentiation, cost leadership

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INTRODUCTION

The innovativeness of enterprises is considered one of the main determinants giving them competitive advantage in an increasingly complex environment (Romão and Nijkamp, 2019; García-Sánchez et al., 2019; Bogers et al., 2018; Nada et al., 2011; Chesbrough 2003; Chesbrough and Crowther, 2006; Gassmann and Enkel, 2004). Possibilities to inter-

nalise required data, knowledge or competencies are limited (Michelino et al., 2014); therefore, a specific approach to innovation of an enterprise is included in its business strategy. Moreover, the turbulent nature of the environment means changes in circumstances that are favourable to innovation, especially in terms of technological innovation, which is now becoming greatly dependent on outsourcing and external

knowledge. Using the technology and ideas to generate innovation, enterprises can maximise the efficiency of their innovation processes, which indicates the tendency towards the open innovation model. The topic is also extensively discussed in the literature.

The popularity of the open innovation concept around the world (Chesbrough and Crowther, 2006; Gassmann and Enkel, 2004; Michelino et al., 2014; Cassiman and Valentini 2016; Tafti et al., 2019) gives rise to a question regarding the determinants required to open the innovation process. Authors focus on the strategy of an enterprise aimed to establish whether the opening of the innovation processes depends on the type of strategy employed by the enterprise. Furthermore, authors considered the age, size and the operational range of enterprises to analyse the phenomenon of opening the innovation process. In light of such considerations, the paper aims to analyse the relationship between different types of corporate strategy and open innovation in the contexts of age, size and the operational range of enterprises.

1. CONCEPT OF OPEN INNOVATION — THE THEORETICAL PERSPECTIVE

The definition of open innovation was proposed by Chesbrough and Bogers in 2014 as “a distributed innovation process based on purposively managed knowledge flows across organisational boundaries.” The main objective is to improve the innovativeness of an enterprise and to search for outlet markets for technologies and ideas, which do not fit in the current business concept. In this regard, the concept comes down to three basic dimensions (Chesbrough, 2003): the inflow of knowledge, the outflow of knowledge and the business model. The dispersion of the innovation process through the inflow and outflow of knowledge occurs with the use of both monetary and non-monetary mechanisms, in accordance with the corporate business model. This facilitates collaboration with various external entities and specialists (customers, suppliers, R&D units, scientific institutions) in the scope of generating innovation. It means that the boundaries of an enterprise become an adopted barrier, which facilitates the improvement of innovation at virtually any stage of the development process. Ideas unused by the enterprise are made available on the market free of charge, on the basis of licensing or other similar agreements.

The scale of this continuum also includes innovation generated in a traditional manner, through closed processes (based on internal corporate R&D activities, which are strictly controlled to prevent the competitors from gaining an advantage). To save time and reduce costs, only the ideas with the greatest potential are developed further. This approach requires a high level of autonomy, extensive investment in R&D departments and appropriate procedures to protect the know-how of the company.

According to the open innovation model, enterprises are able to acquire additional sources of income by selling ideas with a lower potential for development. Moreover, they can broadly access knowledge and external experts, which reduces the time required to develop innovation. Sharing know-how is the basic element which differentiates the two models. In the closed model, organisations often conduct long-term research on innovation, incurring high costs, with no guarantee of success. A return on long-term investments could be achieved by selling them. However, Chesbrough (2003) stressed that the basic factor in the development of open innovation was a significant increase in the number and level of mobility of knowledge workers. This, in turn, makes it more difficult to control their knowledge and ideas (Chesbrough, 2003).

Research on open innovation (e.g. Chesbrough and Crowther, 2006; Gassmann and Enkel, 2006) shows that enterprises often focus only on one of the first two dimensions of this concept, i.e. the inflow or outflow of technology, ideas and knowledge. In addition, each of the streams is used with a varying degree of openness (Cheng et al., 2014). To a great extent, this approach depends on the age of a company and the sector, in which it operates. Mature businesses and those operating in low-tech sectors mainly focus on sharing their knowledge and ideas, and only secondly on acquiring knowledge from the market. Whereas organisations linked to high-tech sectors are much more dedicated to gaining external knowledge than making it available to others (Gassmann and Enkel, 2006).

2. MEASUREMENT OF THE OPENNESS OF INNOVATION PROCESSES

The opening of innovation processes is related to the ability of an enterprise to absorb knowledge from its surroundings. However, the ability to absorb

Tab. 1. Openness of business innovation processes

TYPE OF INNOVATION	SOURCES OF KNOWLEDGE
Closed innovators: enterprises with innovations developed mainly through their own efforts (they have neither cooperated nor bought external R&D)	Internal knowledge is the most important source
Hybrid innovators: enterprises with innovations developed mainly through re-search and development activities, but having cooperated or bought external R&D	Both internal and external knowledge is just as important
Open innovators: enterprises with innovations developed mainly through cooperation with other entities or by other entities	At least one external source is more important than internal knowledge

Source: (Barge-Gil, 2010).

knowledge can become an obstacle to seeking and acquiring knowledge (Cohen-Levinthal, 1990; Faludi, 2014; Matricano et al., 2019). Large businesses have a better knowledge-absorption ability and often a lower demand for external sources, and it is the other way around for smaller enterprises (i.e. higher demand for external knowledge, but a much poorer absorption ability; Barge-Gil, 2010; Faludi, 2014; Matricano et al., 2019). The levels of “openness” of innovation processes in an enterprise are presented in Tab. 1.

Generally, enterprises can be divided into closed and open innovators. Unlike open businesses, closed enterprises do not share their knowledge-based resources nor ideas developed by internal R&D departments in the outlet market. Rather often, they also do not seek such knowledge from their surroundings; therefore, the main source of innovation for them remains the internally developed knowledge. Whereas in enterprises dedicated to open innovations, external knowledge is often more important than internal knowledge. Such enterprises share their resources with other entities and freely use ideas and sources of inspiration for innovation. Whereas hybrid enterprises are those that consider external knowledge complementary to internal knowledge.

The literature specifies no uniform method for measuring the openness of enterprises in terms of innovation (Bianchi et al., 2011; Michelino et al., 2014). Moreover, multiple studies in this field often present contradictory results.

The size of an enterprise, as the determinant influencing its effective use of open innovations, is considered in many studies (Laursen and Salter, 2006; Keupp and Gassmann, 2009; Michelino et al., 2014; Schroll and Mild, 2011). The publications by Chesbrough (2003) and Chesbrough and Crowther (2006) indicate that openness to innovation is mainly characteristic for large enterprises from high-tech sectors. This view was also shared by Bianchi (2011), who claimed that large enterprises implemented this con-

cept on average 1.5 times more frequently than SMEs. Furthermore, Sandulli (2012) pointed out that larger enterprises were often more willing to collaborate with others in the scope of innovation compared to smaller businesses. However, a contradictory view was presented by Barge-Gil (2010), who believed that open innovators were enterprises whose employment rates were lower than for hybrid innovators. A lack of a correlation between the size of the business and the level of openness of its innovation processes was stressed by Podmetina et al. (2011). Christensen et al. (2005) observed that apart from the size of an enterprise, a major determinant was the phase in the life cycle of the used technology and the sector of business operation.

Another factor often referred to in studies, which influences the openness of businesses in terms of innovation, is their age (Teirlinck and Poelmans, 2012; Michelino et al., 2014; Acha, 2006). Teirlinck and Poelmans (2012) and Acha (2006) claimed that the differences in the relationship between age and openness of innovation processes arise from the sector in which the enterprise operates. No correlation between the age and openness of business innovation processes was reported by Keupp and Gassmann (2009) and Schroll and Mild (2011).

The operational range of enterprises was also analysed in terms of innovation (Meyer-Krahmer and Gundrum, 1995; Nowakowska, 2011; Stenberg and Arndt, 2015). The market opportunities of enterprises and the development opportunities of regions increasingly depend on their capacity to continuously generate innovative products and processes. The innovation environment will have a positive impact on enterprises operating in it. Therefore, enterprises operating locally or regionally may open innovation processes through participation in innovation networks or clusters (Meyer-Krahmer and Gundrum, 1995; Nowakowska, 2011). On the other hand, enterprises operating at national and international level have even wider access to sources of innovation, among other things due to the opportunity to coop-

erate with entities in countries with the highest level of innovation (Niedzielski and Rychlik, 2007).

3. ENTERPRISE STRATEGY AND OPEN INNOVATION

The effective opening of business innovation processes requires an innovative approach to be included in the overall business strategy. This helps to create an organisational culture, which is open to generating innovation and providing clear guidelines necessary to fulfil strategic objectives (Nada et al., 2011). An innovative approach embedded in the strategy of an enterprise should allow it to (Nada et al., 2011):

- establish the strategic arena for innovation;
- determine the objectives and expectations for the results of innovation;
- determine the desired level of innovativeness;
- manage risk associated with innovation;
- allocate appropriate staff and financial outlays.

Activities in the scope of opening the innovation processes constitute a part of the overall business strategy, as they determine the future, survival and development of the enterprise, especially in the context of the unstable and turbulent nature of its surroundings. Therefore, modern management should be focused on the provision of the capital, infrastructure and human resources necessary to support business innovation processes (Nada et al., 2011).

The concept of open innovation assumes the ability of an enterprise to continuously seek competitive advantage by making use of the opportunities and threats in its surroundings. Therefore, formal boundaries of an enterprise constitute an adopted barrier to the flow of information, ideas and technologies (Tylzanowski, 2015). These are the strategies formulated on the level of a business unit and allow enterprises to gain and maintain a competitive advantage in their sector (Crema et al., 2014).

According to Porter (1985), an enterprise can employ three strategies to allow it to gain competitive advantage: cost leadership, differentiation and focus. However, the focus strategy refers to costs or differentiation within a given sector of the industry (Porter, 1985); therefore, it is not discussed in this article. Moreover, Porter (1985) talked about the necessity to develop a horizontal strategy that connected the actions of business units to facilitate the efficient use of its internal links (the flow of know-how, joint

investments, independent decision-making of the units; Porter, 1985). The horizontal strategy includes the diversification of the enterprise's operation.

The cost leadership strategy involves establishing business costs at a slightly lower level compared to that of sector competitors. A significant advantage in this regard is often achieved by using economies of scale, serving several market sectors, utilising modern and innovative technologies as well as cheaper access to resources (Porter, 1985). The impact of open innovation on the costs incurred by enterprises has not been clearly determined. Razak et al. (2014) stressed that the opening of business innovation processes enables enterprises to achieve economic benefits related to the reduction of their total costs and increase the market appeal of their products (Razak et al., 2014). Moreover, the implementation of the concept of open innovation contributes to the reduction of R&D costs incurred by the enterprise (Ades et al., 2013). On the other hand, it may result in increased costs related to the management of complex external relations (Michelino et al., 2014). This view was also shared by Laursen and Salter (2006), who observed that seeking and verifying relevant external knowledge may be cost-, labour- and time-intensive. Whereas Chesbrough and Crowther believed that enterprises that focused on the fast development of products treated costs as a secondary issue.

On the basis of literature findings, the following hypothesis was established:

H1 — The more a strategy is concentrated on cost leadership, the more open is the innovation process.

The strategy based on differentiation enables enterprises to offer products considered unique by the recipients at a higher price (Porter, 1985). Following the same reasoning, it can be assumed that enterprises implement this strategy through the use of innovation (Crema et al., 2014). In Published open innovation studies make references to the effect of this concept on the ability of enterprises to generate radical and incremental innovation. Studies by Chesbrough and Crowther indicate that by opening their innovation processes, enterprises are able to monitor the market in search of breakthrough technologies, which may pose a threat. Moreover, many researchers (Huizing, 2011; Pariada et al., 2012; Gassmann, 2006; Cheng, 2016; van de Vrande et al., 2011) believe that the concept of open innovation is favourable to the development of radical innovations. This is because opening business innovation processes to knowledge, technologies and ideas facilitates radical development of innovation (Gassmann, 2006; Parida et al., 2012;

Cheng, 2016). Knowledge-sharing positively impacts on the organisational learning processes as well as knowledge updating and stimulates new ideas (van de Vrande et al., 2011; Cheng, 2016). Laursen and Salter (2006) believed that enterprises which developed radical innovations required significant investment outlays for their research and development activities, but their chances of success were slim. Incremental innovation requires less effort; however, its impact on efficiency is also smaller.

On the basis of literature findings, the following hypothesis was established:

H2 — The more a strategy is concentrated on differentiation, the more open is the innovation process.

The diversification strategy assumes gaining competitive advantage by expanding the activity to a new market sector or area of production (Crema et al., 2014). Analysing the impact of diversification on open innovation is not an easy task due to the multitude of its forms. Crema et al. (2014) believed that a product diversification strategy influenced the level of openness of business innovation processes (Crema et al., 2014). This belief was also shared by Lichtenhaler (2008), who stressed that enterprises with a varied technological portfolio purchased external technologies more frequently than enterprises specialising in one type of technology.

On the basis of literature findings, the following hypothesis was established:

H3 — The more a strategy is concentrated on diversification, the more open is the innovation process.

The decision whether an enterprise should generate innovation solely through its internal R&D departments or through collaboration with external partners depends on its skills and abilities, and the desire to control innovation processes (Crema et al., 2014).

As mentioned before, to generate innovation, modern enterprises usually focus on both (the traditional — closed and open) models. It is because an extreme desire to generate only one of those types of innovation can have negative effects on the strategy implemented by the enterprise (Ades et al., 2013). This view is shared by Crema et al. (2014) who believed that excessive opening of innovation processes might have a negative influence on the long-term success of innovations due to the loss of control and native competences. Whereas completely closed innovation processes may increase the time required to bring innovations to the market and create a desire to extend their life cycles. This necessitates enterprises to establish the openness of their innovation pro-

cesses at such a level as to enable them to develop their products quickly, to build key competences and to ensure the protection of their intellectual property (Gassmann et al., 2010).

4. RESEARCH METHODOLOGY

Based on the literature, the authors of the paper established the following research objectives:

- to analyse the scale of the phenomenon related to the adoption of the open innovation model in enterprises considering their age and size;
- to determine the type of strategy conducive to the implementation of open innovation activities in the surveyed enterprises.

The research targeted companies in Poland that were surveyed from January to April, using traditional and electronic forms of a questionnaire. The questionnaire was developed based on a 5-point Likert scale. The level of “openness” of innovation processes in an enterprise was determined according to a 3-point scale used in Barge-Gil (2010) and Celadon (2014) studies, namely, a closed innovator, a hybrid or semi-open innovator, and an open innovator. The strategy implemented by the enterprise was classed into main three types, used to achieve a competitive advantage, i.e. cost leadership, differentiation or diversification (Porter, 1985; Crema et al., 2014).

The study examined 100 randomly selected enterprises of various sizes, operating in different business sectors. The selection was made from the mailing list available from the Eniro online database of 3,000,000 entities. The questionnaire consisted of three parts, plus the section regarding respondent particulars.

The degree of application of the open innovation model was determined by two factors — streams of “input” and “output” of knowledge, ideas and innovations in enterprises, which were analysed using specific parts of the questionnaire. The first part of the questionnaire determined the input factor and referred to the inflow/acquisition of knowledge from the external market and long-term plans of enterprises in terms of obtaining external knowledge. It covered six research areas, 24 components in total. The analysis included sources of external knowledge acquisition by the enterprises. The focus was on entities from the micro-environment of the enterprise (competitors, suppliers, customers, various enterprises from the industry and outside the industry as well as R&D units). Acquisition of knowledge through

participation in fairs, exhibitions, training and the purchase of licenses was also included.

The second part of the survey was dedicated to the output factor and included questions related to the outflow/sale of knowledge unused by the enterprises. This factor considered two aspects — the paid transfer of knowledge and knowledge-sharing in cooperation with external entities. Here, the focus was also on entities from the micro-environment. Also, entities from the international environment of the surveyed enterprises were considered when analysing the “input” and “output” factors of knowledge. The dependent variable was defined as open innovation, considering the “input” and “output” factors. Independent variables were age (length of operation on the market) and size (determined by the number of employees) as well as the extent of enterprise operation (from local to international). Individual strategies, i.e. cost leadership, differentiation and diversification, constituted an independent variable as well. However, the assessment of the type of strategy used by the surveyed entities was left to the respondents.

Statistical analysis of data was performed using IBM SPSS Statistics software, ver. 20. The results of Cronbach's α coefficient measurements indicate rather high internal consistency of the scale and reliability of the measurement of particular variables (between 0.799 – 0.955).

Next, linear regression and correlation analyses were carried out. Due to the size of the test sample, the results of the study should be treated as a pilot study. The level of openness of business innovation processes and the strategy implemented were measured on the basis of subjective opinions of employees. The randomness and representativeness of the sample were verified with the use of the χ^2 test (significance $p < 0.05$ for size, age and the operational range distribution of enterprises with open innovations and $p < 0.001$ for the distribution of selected strategies with open innovations).

5. STUDY RESULTS

The survey was intended for all organisations regardless of their size, activity profile or affiliation to a branch of the economy. As a result, 118 respondents were obtained, and 18 were removed due to irregularities. The respective data is present in Figures 1, 2 and 3.

The conducted study shows that 16% of enterprises from the test sample are open innovators. More than half of the enterprises surveyed can be classed as hybrid innovators (55%), which base their innovation on both external and internal knowledge. Whereas as many as 29% are closed innovators that generate innovation independently. The operational range of the surveyed enterprises was primarily national (39% responses) and international (40%).

First, the correlation analysis was performed examining the impact of independent variables — the size, age and the operational range — and three types of strategy on the dependent variable — the level of openness of innovation processes. Results showed a statistically significant (0.001) correlation between open innovation and the size (0.437), age (0.317) and the operational range (0.309) of enterprises. Interesting results were found in the case of strategy types: only cost leadership had a positive correlation with the open innovation process, while the other two types were negative. All correlations were statistically significant, but only cost leadership and differentiation had high scores (0.560 for cost leadership; and -0.571 for differentiation), while the strategy of diversification had a low score (-0.12).

The regression analysis was performed as a main statistical analysis. Coefficients are presented in Tab. 2.

Six verified variables were responsible for almost 16% of dependent variable variations, which means that strategy and control variables (the size, age and the operational range) determine only 15.9% of the

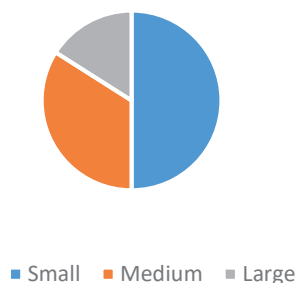


Fig. 1. Size of the enterprise

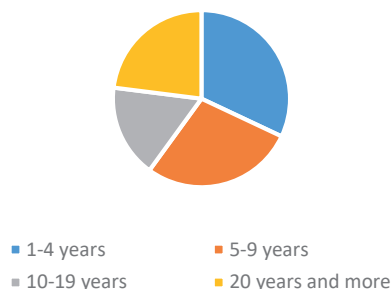


Fig. 2. Age of the enterprise

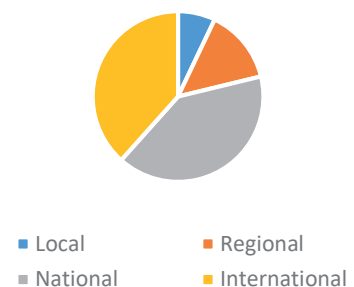


Fig. 3. Operational range of the enterprise

Tab. 2. Coefficients of the Anova regression analysis (with Open_Innovation as dependent variable)

MODEL B		NON-STANDARDISED COEFFICIENT		STANDARDISED COEFFICIENT	T	SIGNIFICANCE
		STANDARD ERROR	BETA			
1	(Constant)	2.819	1.304		2.161	0.033
	Size	0.099	0.056	0.162	1.766	0.081
	Age	0.084	0.058	0.137	1.459	0.148
	Operational range	0.134	0.060	0.178	2.239	0.028
	Cost leadership	0.238	0.265	0.169	0.899	0.371
	Differentiation	-0.656	0.278	-0.431	-2.357	0.021
	Diversification	-0.174	0.262	-0.120	-0.665	0.508

tendency to open innovation processes. The value of F statistics for the model equals $F(1.98) = 15.909$; $p < 0.0001$. Moreover, the study shows that small enterprises have a higher tendency to open their processes to innovation (average 3.00 out of 5 points) than large enterprises (average 2.35 out of 5 points). As results suggest, only the operational range and the strategy of differentiation are significant.

CONCLUSIONS

Literature still lacks research on open innovation regarding the relationship between the strategy followed by enterprises and the possibility of implementing open innovation activities. The concept itself, despite the high popularity globally, is still relatively unknown in Poland; thus, only a small number of organisations apply the concept to its fullest extent. Only 16% of the surveyed enterprises were open innovators, whereas more than half were classed as hybrid innovators. The existing knowledge gap necessitates the analysis of the concept of open innovation in the context of enterprise strategy.

Opening innovative processes to external knowledge is associated with many aspects of the functioning of enterprises in the environment, including finding the right knowledge or partner for exchange, securing know-how against the leakage during the cooperation or the possibility of knowledge absorption. The absorption ability grows with the size of an enterprise. However, open innovations can also bring many benefits to small enterprises (reducing R&D costs, modernising production processes, reducing the risk of implementing innovations). Research shows that the size and age of enterprises has an impact on their tendency to use open innovation. From among the respondents, 48% were small and micro enterprises, of which 1/3 were open innova-

tors. In terms of the entire test sample, open innovators were enterprises present on the market for less than ten years. In addition, the analysed enterprises were more willing to absorb knowledge and ideas from external sources than to share their knowledge with other entities in their surroundings. The average value established for the inflow of knowledge to studied enterprises was 3.0 out of 5.0 points, whereas for the outflow of knowledge — 2.5 points. Aiming to validate the findings, research should be carried out on the revenue and costs related to the inflow and outflow of knowledge in enterprises.

The study showed that the type of strategy employed by enterprise influences the level of openness of its innovation processes. Based on the correlation analysis, hypotheses H1, H2 and H3 hypotheses regarding the relationship between the cost leadership strategy, differentiation strategy, diversification and open innovation could not be rejected. Based on the regression analysis, only the hypothesis H2 could not be rejected.

Strategies of differentiation or qualitative leadership enable enterprises to diversify a product by improving its quality, modifying its appearance or use. It is extremely difficult to maintain the uniqueness and originality of the product in the era of rapidly changing market and customer expectations (especially for smaller enterprises). One of the ways to keep up with the market is to open innovation processes to external knowledge. Opening innovative processes can bring small and micro organisations many unique benefits, e.g. reducing the risk and costs arising from the implementation of innovative ideas, knowledge acquisition from the best specialists in the industry and implementing large projects in cooperation with R&D institutions. However, research has shown a negative correlation between a differentiation strategy and the opening of innovation processes by enterprises. This may be due to the fact that

enterprises using the product differentiation strategy focus primarily on innovations developed by their own R&D departments. The ability to maintain the uniqueness of the offer and customer loyalty is connected with the need to protect the knowledge and technology of an enterprise from competitors. Strong protection of know-how and control of own innovation processes is the domain of innovations understood traditionally (closed innovations).

Cost leadership strategy enables production at a lower cost compared to the competition while maintaining the quality. This is possible because of experience. Cost leadership is, therefore, possible mainly when enterprises are efficiently managed (which allows to avoid waste and reduce costs with increasing volume) and have a sufficiently large market share. The reduction of production costs is often associated with the implementation of technological or organisational innovations. Such enterprises primarily focus on developing internal knowledge and R&D departments with the help of external entities. The strategy of cost leadership is chosen by large enterprises, which, as previously noted, have greater opportunities to absorb technology and external knowledge. Establishing a new partnership to exchange knowledge and technology can reduce the risk, time and cost of developing and implementing innovations. In addition, following the market in terms of technology helps to find new development opportunities.

The study also considered the strategy of diversification; however, no linear relationship was observed between the variables. This result is surprising because the diversification strategy enables the enterprise to enter new areas of activity thanks to its own resources or the acquisition of external resources. Therefore, it seems that this strategy should be most closely linked to open innovations. The existing research efforts do not provide a clear answer on how to link diversification strategies with open innovations (or with innovations in general; e.g. Orlando et al., 2017). Some scholars even argue that diversification and innovation are almost in opposition (Palepu 1986; Hoskisson et al., 1993 for Orlando et al., 2017). This aspect definitely requires further research.

Limitations of the presented research were mainly the size of the test sample and difficulties with reaching respondents having the appropriate knowledge and position. Moreover, the superficiality of the questionnaire prevented a deeper analysis of the complex processes related to the generation of inno-

vation. Research on the subject should be extended through interviews.

In the future, studies on the intent of businesses to use open innovations should also include three additional aspects proposed by Acha (2006):

- Breadth expressed as the number of sources used;
- Depth of cooperation;
- Cooperation patterns (models).

In addition, issues related to the inflow and outflow of knowledge should be analysed by examining the expenditure on such activities. In contrast, the strategy itself should be explored through the performance of the enterprise and its relationship with the environment.

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