SILESIAN UNIVERSITY OF TECHNOLOGYPUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2019
ORGANIZATION AND MANAGEMENT SERIESNO. 136

FAMILY INVOLVEMENT AND INNOVATION IN FAMILY ENTERPRISES

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Abstract: The impact of the family in the innovation of family businesses (FB) is a particularly important research issue that is explored in the literature on family entrepreneurship. The results of previous research conducted in the field are, however, ambiguous: some point to the positive impact of the family on innovation, and others see the contrary. The ambiguity of research results regarding the relationship between family involvement in a family business and the level of innovation of these firms justifies interest in investigating this topic. Thus, this paper aims at exploring the influence of the family on the implementation of innovations within family firms. In order to achieve the above research goal, research was carried out on a sample of 295 family businesses in Poland in 2018. Its findings indicate only one area where there are weak relationships between variables describing family involvement in the functioning of the firm and implemented innovations.

Keywords: family involvement, innovation, family firm.

1. Introduction

The relationships between family involvement in the management and comprehensive operations of family businesses, as well as the level of their innovativeness, deserve attention in the field of family entrepreneurship. The conducted literature studies justify the notion that the level of innovativeness of family businesses is influenced by factors determining the form of the family impact on the firm, such as participation in management and number of family members involved in the business or ownership (Chrisman, et al., 2015). At the same time, the research to date, both in the world and in Poland (Kraśnicka, et al., 2019) does not give an unequivocal answer as to whether the family impact on the firm's innovativeness is positive or negative. This result underlines the high complexity of these connections, and at the same time induces the need for further research. Some research results indicate negative relationships

between family involvement and, e.g. expenditure on innovation in family enterprises (Dieguez-Soto, et al., 2016), other studies confirm the positive and significant effect of family on the owned firm's innovation output (Duran, et al., 2016). In turn, the European survey of family businesses, which also included Polish firms, shows that increasing innovation is not a priority for these entities (European Family Business Barometer, 2016). In addition, over the next five years, only 45% of all respondents see the need to introduce improvements and act in an innovative way so as not to go out of the market (this was recognized as the main challenge by non-Polish firms – in up to 64% of all cases) (Family Firm Survey, 2016). It should also be noted that in the study of the impact of a family on its business (its innovativeness, performance), various parameters are used to describe this impact (participation in management, ownership, number of family members participating in the firm's activity, governance). Some research assumes familiness as its subject – a multidimensional construct describing the family's involvement in its firm (Weismeier-Sammer, et al., 2013).

In the context of the low innovativeness of Polish firms (see: Skowrońska, and Tarnawa, 2018), in particular, those which belong to the SME category, and the existing inconclusive research results on the relationships we are interested in, as well as a relatively small amount of research conducted in Poland regarding this issue, this paper aims at identifying relationships between family involvement and innovativeness of family businesses in Poland.

Due to the inconsistent results of previous research related to the relationships under consideration, the formulation of hypotheses was abandoned and merely a research question was posed: Are there any relationships between variables describing family involvement and the level of innovativeness of family businesses?

The paper presents the results of empirical research conducted on a sample of 295 Polish family businesses in 2018[1].

2. Family involvement – theoretical background

Studies into family involvement in family business activities, especially in the context of innovativeness and performance, are conducted on the basis of various theories. The assumptions of behavioural theory of the firm (Cyert, and March, 1963), stakeholders theory (Mitchell, et al., 1997) and agency theory (Eisenhardt, 1989; Fama, and Jensen, 1983) may be useful in this context. To clarify the relationship between family involvement in the business and impact on innovation, it is reasonable to adopt the resource-based view perspective (Chrisman, et al., 2004). Not only does the study of these relationships take into account the

[1] The paper presents an excerpt of research results carried out at the Department of Entrepreneurship and Innovative Management at the University of Economics in Katowice – as part of maintaining the research capacity in 2018. The project title: 'Problems of development of family entrepreneurship in Poland.'

family economic and financial goals, but it also brings into the fold, the non-financial that is related, for example, to the desire to maintain control over the firm (Chrisman, et al., 2010); Matzler, et al. 2015). Those circumstances can affect both the level of expenditure on innovation and the final level of innovation of family businesses (Campopiano, et al., 2013).

Various components (dimensions) are used in the study of family involvement in running their own business:

- ownership, management and number of participating generations (Chrisman, et al., 2010);
- ownership, management and governance (Matzler, et al., 2015);
- owners' predominance among employees or active ownership (Lwango, et al., 2017);
- family management involvement, generational ownership dispersion and family member reciprocity (Kellermanns, et al., 2012).

Other approaches are also adopted in research into these relationships, the familiness construct in particular, which includes a bundle of intangible resources that reflect the degree of family, enterprise and management integration, thus constituting an important distinguishing feature of family enterprises (Daspit, et al., 2017; Nordqvist, et al., 2014). The familiness studies use a measurement tool – Family Influence Familiness Scale (Frank, et al., 2016).

The research presented in this study used the following components of family involvement in running their own business: generation, number of family members involved in the firm and share of family members in the total number of employees. The ownership survey was abandoned as the examined enterprises were 100% family-owned[2].

3. Family involvement and innovation

Innovations are consequential in the development of all enterprises, including family businesses, as they can be a source of competitive advantage and determine their success (Li, and Daspit, 2016; Fuetsch, and Suess-Reyes, 2017; Kellermanns, et al., 2012). Innovations are identified with: production or adaptation, assimilation and use of new products that add value in both the economic and social spheres; modification and development of products, services, markets; development of new production methods, as well as introduction of new management systems (Crossan, and Apaydin, 2010, p. 1155). The Oslo Manual (2005) provides paramount standards in defining and isolating types of innovations[3]. Moreover, the Oslo

[2] This is a characteristic feature of the situation in Poland – the vast majority of family businesses are 100% owned by one family.

[3] At the end of 2018, the fourth edition of the Oslo Manual [2018] was published. This includes a revised approach to the classification of innovations. In the presented research, which was carried out in 2018. the rules contained in the third edition of the Oslo Manual [20105] were adopted.

Manual (2008) specifies the concept of innovations and limits their scope to the implementation of a new or significantly improved product (goods or service) or process, a new marketing method or a new organizational method in business practice, workplace organization or relations with the environment. Based on the Oslo Manual, the following innovations are distinguished: technological (product and process) and non-technological (organizational and marketing). It is assumed in this definition that the products or processes are new, at least, from the point of view of the enterprise (Osiadacz, 2012). Product innovations include completely new products and services, as well as significant improvements to existing ones. Process innovations are interpreted as significant changes in product production and delivery methods. Organizational innovations are identified with the implementation of new organizational methods that can be manifested in the field of operating principles adopted by the firm, in the organization of the workplace or in the firm's relations with the environment. However, marketing innovations are treated as implementations of new marketing methods (changes in product design/construction, packaging, product promotion and distribution, as well as methods of product and service price formation) (Oslo Manual, 2008, p. 19). At the same time, it is noteworthy that not only two categories of non-technological innovations, but also management innovation regarding the process, management structures and methods are separate subjects of research (Birkinshaw, et al., 2008; Damanpour, 2014; Kraśnicka, et al., 2016).

Research to date does not provide a conclusive answer to the question: what is the impact of the family on innovation in FB (De Massis, et al., 2013; De Massis, et al., 2015; Li, and Daspit, 2016), although it is believed that familiness is an important factor influencing the innovativeness of FB (Carnes, and Ireland, 2013). Some research results indicate the positive impact of the family on innovation (Llach, and Nordqvist, 2010), while others point to the opposite – sometimes in comparison with non-family enterprises (Muñoz-Bullón, and Sanchez-Bueno, 2011). Such inconsistent results point to the diversity of FB, their different goals and innovation strategies (Classen, et al., 2012). In addition, the results of research conducted to date in various countries indicate FB's desire to avoid the risk associated with innovation (Anderson, and Reeb, 2004; Hiebl, 2013; Chrisman, et al., 2015). The scale of operations and firm's size may also be a factor limiting FB's investments in innovative activity – in Poland, micro and small enterprises dominate among those firms.

In particular, the research focuses on expenditure on innovation, its effects in terms of family involvement in firm management (Muñoz-Bullón, and Sanchez-Bueno, 2011; Dieguez-Soto, et al., 2016; Duran, et al., 2016). There are also many comparisons of innovativeness of family and non-family firms (Classen, et al., 2014) that show that family businesses are less innovative (De Massis, et al., 2013; Steeger, and Hoffmann, 2016; Jaskiewicz, et al., 2015). Research carried out by Classen, et al. (2014) indicates significant differences between family and non-family SMEs at every stage of the innovation process and at the same time confirms, among others, that innovative behaviors in family SMEs are more complex and multi-faceted than in large ones. For example, the research by Matzler, et al., (2015) confirms the negative

impact of management and governance on innovation input (but no negative impact of ownership) in FB, but also the positive impact of family management on innovation output (measured in terms of patents and forward citation intensity), and only partially confirmed the hypothesis about the positive impact of family governance on innovation output. Studies, hence, indicate the complexity of the relationship between a family business and innovation, as evidenced by research results showing negative and significant relationship between FB and innovation input, but positive and significant effect of family firms on innovation output (Duran, et al., 2016). This is also evidenced by other studies – e.g. the team of Kellermanns, et al. (2012), which indicate that the interactions between family management involvement and innovativeness and family member are not significant. In addition, these studies evince that only the interaction between generational ownership dispersion and innovativeness was significant; the interactions of innovativeness with family management involvement and family member reciprocity were not significant.

4. Methodology

The research was conducted in 2018, among family businesses in Poland, on a sample of 295 enterprises. The intent was to answer the question regarding the relationship between variables describing family involvement and the innovativeness level of family businesses. A family enterprise was considered to be an economic entity of any size and legal form which is wholly or in a substantial part owned by one person or members of one family, and which is simultaneously managed by them (Steinerowska-Streb, 2012). Given the specifics of family businesses in Poland, it was assumed that family ownership must exceed 50% for a business to be classified as a family business.

The frame of the studied population was a group of enterprises that *are members of* the Center for Research and Knowledge Transfer[4], and which carried out the study. The sampling was deliberate. The data were collected in a structured direct interview. The choice of this research method was determined by the possibility of obtaining homogeneous and comparable data.

The survey respondents were owners of family enterprises, managers or other family members indicated by them. The interviewer asked the respondents questions included in the questionnaire that was specially prepared for the needs of the study. This questionnaire was constructed in accordance with generally accepted principles of building a questionnaire survey. The included categories of questions were verified for relevance and reliability.

[4] This unit operates at the University of Economics in Katowice and conducts research, as well as provides expertise for external entities.

A confidence level of $\alpha = 0.95$ and a maximum error of 5% were used to determine the required sample size. The fraction size was set at 0.2 on the basis of data published by the Central Statistical Office for 2015-2017 regarding innovations introduced in Polish enterprises (Innovative activity..., 2018). The required minimum sample size was 246. In the study, the sample was slightly larger (295 entities).

Among the surveyed family enterprises, 81.4% were firms owned by the generation of founders, while 18.6% was owned by successors. In 42.2% of all enterprises, 1 or 2 family members actively participate in the firm activities, in 38.7% of all firms, 3 or 4 family members are involved in the functioning of the enterprise, and in the remaining 19.1% of all firms, more then 5 family members work; 21.4% of all enterprises were micro-enterprises, 74.9% - small, 3.1% - medium and 0.7% - large[5]. 24.1% of all the respondents conducted commercial activities, 29.2% – services, 20.3% – production and 26.4% - mixed activities. The subject of the study was also the share of family members in the total number of employees – this percentage was between 15 and 116%.[6] In analysing this variable in relation to innovation, for comparative purposes, three groups of the same size were identified among the respondents. The threshold values were then 16.7% and 25%.

Based on the discussed research findings (Kellermanns, et al., 2012; Lwango, et al., 2017), the following variables were selected to measure family involvement: generation (of owners/successors), the number of family members involved in the firm and the share of family members in the total number of employees in the firm. To measure innovativeness, the measures suggested in the Oslo Manual (2008) were used, i.e. the number of implemented innovations over the past three years divided into process, product, organizational and marketing innovations as defined in the Oslo Manual (2008). The control variables included the size of firms by number of employees, period of existence and sector of activity.

The collected data were statistically analysed in IBM SPSS Statistics version 5.0. Considering the nature of the collected data, Spearman's correlation analysis and Chi-square test were used to assess the relationship between variables. In addition, descriptive statistics were used to illustrate the results.

[5] The size of the enterprise was estimated on the basis of employment based on the European Commission guidelines of the recommendation of 6 May 2003 regarding *the definition of micro, small and medium-sized enterprises.*

[6] The value above 100% results from the fact that in some firms the number of family members actively participating in the firm's activity exceeded the number of full-time employees.

5. Results

The solution to the main research problem is presented against the data illustrating the declared innovative activity of the surveyed enterprises. The provided answers show that the number of implemented product innovations has been the highest in family businesses (in over 52% of firms). On average, there were 2.71+/–1.6 innovations of this type per enterprise. Less than 10% of respondents introduced process innovations. The average number of these innovations in each enterprise was 1.82+/–0.73. On the other hand, the surveyed firms made marketing and organizational innovations the least frequently (Figure 1). There was an average of 1.92+/–0.65 marketing innovations and 1.32+/–0.47 organizational innovations per enterprise. The data on the relatively high proportion of family businesses in the sample that have implemented certain types of innovation are interesting (Figure 1). These values are higher than those resulting from the report of the Polish Agency for Enterprise Development (cf. Skowrońska, Tarnawa, 2018, pp. 44-45), while the average number of innovations of individual types implemented per one firm has been relatively small in the last 3 years.

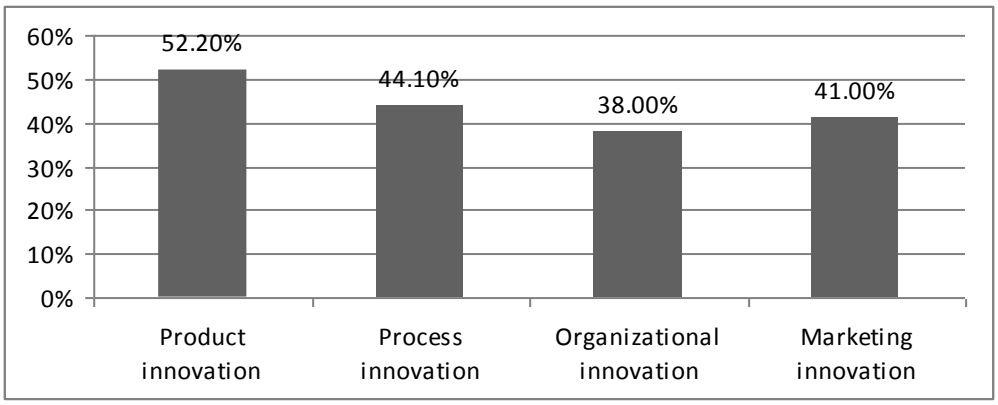

Figure 1. Family businesses that implemented innovations in 2015-2018 (%).

When comparing enterprises owned by founders and successors, it can be seen that product, process and organizational innovations were implemented in a larger percentage of firms run by subsequent generations, compared to firms that belong to the founding generation. In enterprises managed by the first generation, only marketing innovations were introduced in a larger proportion of firms (Figure 2). However, statistical analysis did not denote any relationships (Table 1) between variables or statistically significant differences between the number of implemented innovations and the generation managing the firm.

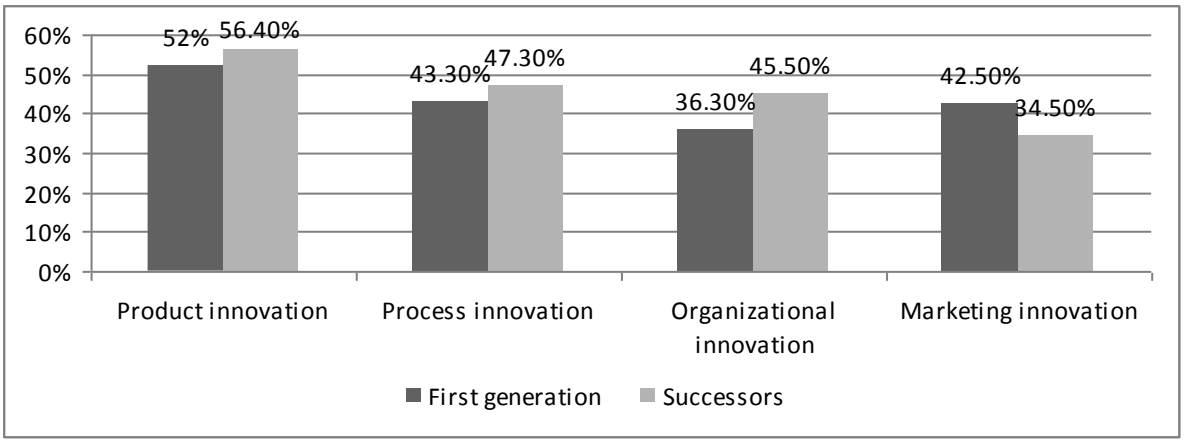

Figure 2. Family businesses that implemented innovations in 2015-2018. The breakdown by the generation managing the firm (%).

Table 1.
Spearman correlation for analysed variables

Type of innovation	Coefficient/ Significant level	The number of family members actively involved in the functioning of the company	The generation that manage the company	The number of family members per non family employee
Product innovation	R	-0.066	0.040	-0.026
	p	0.255	0.495	0.653
Process innovation	R	-0.075	0.031	-0.104
	p	0.197	0.597	0.073
Organizational innovation	R	0.006	0.074	-0.156**
	p	0.917	0.206	0.007
Marketing innovation	R	-0.033	-0.063	-0.070
	p	0.570	0.281	0.233

Note. ** Correlation significant at the level 0.01.

The analysis of data on the implementation of innovation by the surveyed firms according to the number of family members who are actively involved in business activities also did not indicate relationships between these variables (Table 1). However, when three subgroups were distinguished within the surveyed enterprises: firms in which 1-2, 3-4 and above 5 family members work, then in the case of marketing innovations, statistical relationships were revealed between the firms represented by 3-4 family representatives and other categories. A smaller number of marketing innovations were introduced in firms with 3-4 family representatives than in other surveyed family businesses ($p < 0.05$). In the remaining cases, no statistically significant differences occurred, despite the fact that the largest proportion of firms which introduced product, process and organizational innovations were enterprises with 1-2 family members involved (Figure 3).

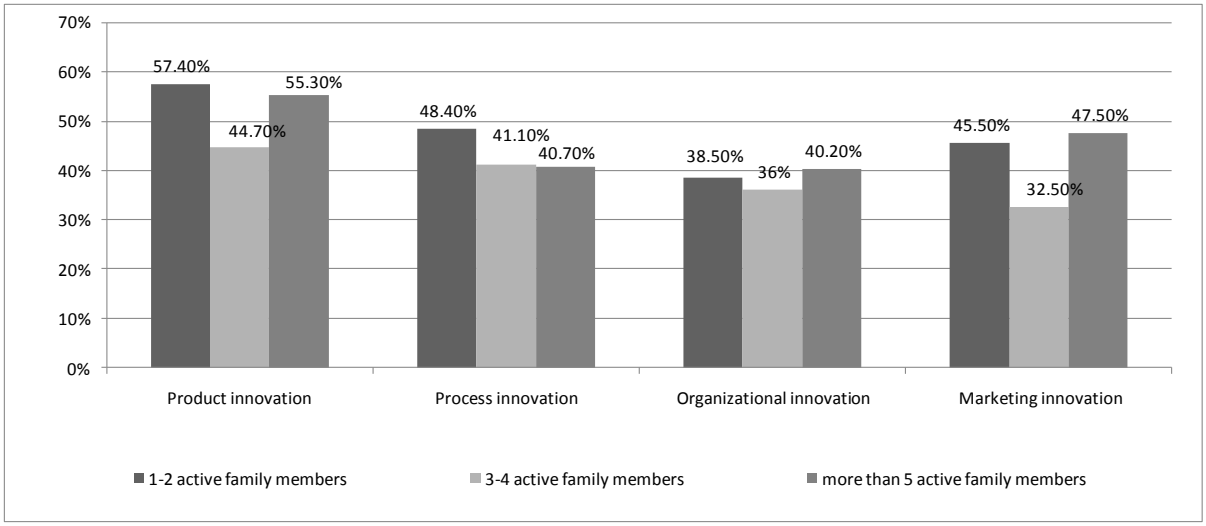

Figure 3. Family businesses that implemented innovations in 2015-2018. Systematization by the number of family members actively involved in the functioning of the company (%).

Differences in the innovativeness of family businesses characterized by a different share of family members actively working in the firm in relation to persons employed in the firm were also recognized (Figure 4). There were no correlations (Table 1) and statistically significant differences in the case of product, process and marketing innovations between the categories of firms identified on this basis. Such differences appeared only in the case of organizational innovations between representatives of the first and third group of respondents ($X2 = 3.89$; $p < 0.05$). In enterprises in which the proportion of family members in the total number of employees was lower, significantly more organizational innovations were implemented.

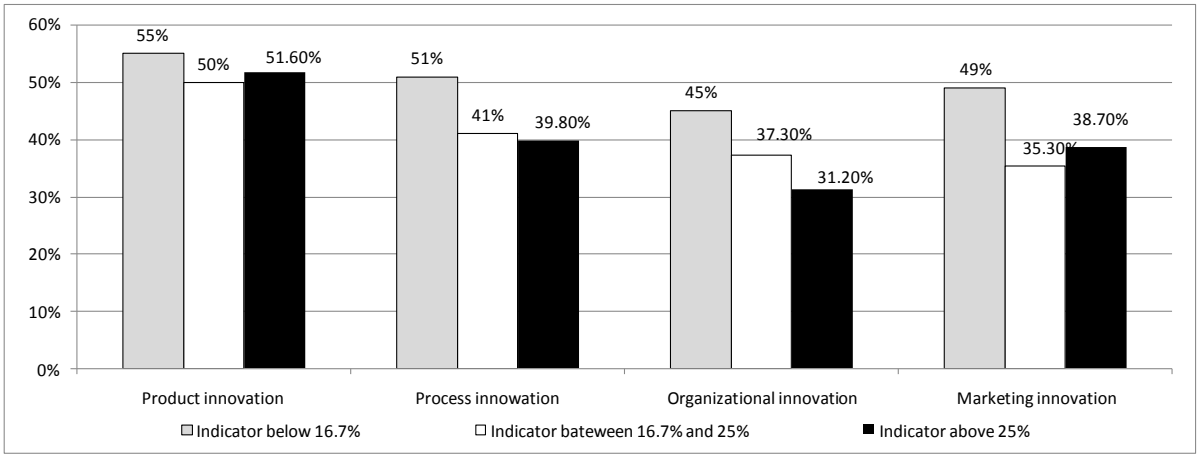

Figure 4. Family businesses that implemented innovations in 2015-2018. Systematization by the number of family members per employee from outside the family (%).

6. Discussion and conclusions

The conducted research indicates that in Polish family enterprises there are not significantly more process, product and organizational innovations implemented when these enterprises are managed by the first or next generation of the owners. The number of family members actively participating in the firm's activities is only related to the number of marketing innovations. A statistically significant relationship was denoted between the proportion of family members in the total number of employees in the firm and organizational innovations. Therefore, the results obtained show that the selected components of family involvement in the firm's operations do not manifest a statistically significant relationship with their level of innovation (with the exceptions indicated above). The test results are only partially consistent with the results of tests carried out in other countries (Kellermanns, et al., 2012). However, it should be emphasized that the results of research conducted using various measurement tools, both family involvement and innovation are not consistent (Matzler, et al., 2015). There are numerous studies that indicate a negative relationship between familiness and expenditure on innovation (input innovation), but a positive relationship with the results of innovative activity (Dieguez-Soto, et al., 2016; Duran, et al., 2016).

The analysis of the obtained research results on family businesses in Poland should take into account the differences in the operating conditions of enterprises in comparison to their counterparts in mature market economies, as well as cultural differences. Most of these entities were founded in the 1990s and most are run by the founders whose motivations for the development of the firm, investing or maintaining full control over the firm may be different than in mature market economies. Although in some family businesses, the next generation is already involved in family businesses and has a formal share in them, the founders still have the casting vote on strategic matters. In addition, most owners of Polish family businesses want to be able to exercise full control over the firm or take active part in building the firm, even after reaching retirement age (KPMG, 2018). A survey conducted by KPMG in 2017 shows that only in less than half of the firms where succession was planned at the same time, was it intended to transfer total control over the firm to the next generation. Although the statistical analysis did not indicate any statistically significant relationships between the number of implemented innovations and the firm management generation, it can be assumed that the succession of the firm is the factor that deserves more research attention and further in-depth investigation of this relationship can be suggested.

The research has its limitations related to, among others, measurement of innovation. Quantitative measurement, although in accordance with the Oslo Manual (2008) has its drawbacks, as it does not reflect the nature of innovation (incremental vs. radical), its weight/importance or effects. A much better measure used by many researchers is the number of patents implemented (Duran, et al., 2016; Matzler, et al., 2015). This measure –

due to the low number of patents filed by Polish firms, especially by micro or small firms, is difficult to apply, and further research should consider the use of other measures for both variables, which will allow the use of more advanced statistical tools to identify complex relationships between the variables considered.

To sum up, the presented research results confirm the high complexity of the relationship between family involvement in the management and functioning of a family enterprise and its innovation. In the Polish realities, no such links were found at a statistically significant level with one exception – a negative correlation between the share of family members in the total number of employees and organizational innovations. The opinion of Kellermanns, Eddleston, Sarathy and Murphy seems to be convincing (2012, p. 94) – 'the influence of the family on family firms should not be viewed solely through a positive or a negative lens' due to the complexity of this phenomenon and its multi-faceted nature. Family business owners, most often managing them, can conclude from the presented research that introducing external managers to the firm or changing the form of ownership (e.g. its dispersion), and thus the loss of control over the firm, are not necessary from the point of the innovativeness level. The research results also justify continued research into the complex phenomenon of family involvement in the functioning of a family enterprise, albeit in a broader perspective – entrepreneurs' motivation to advancement and development and their entrepreneurial mindset. Qualitative studies are also needed.

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