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Article

Comparing the Innovation and Export Performance of Hungarian Family and Non-Family Enterprises: Experiences Drawn from Empirical Surveys

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Abstract: Family enterprises are considered to be one of the oldest and still dominant forms of business organisations. However, their innovation activity is an emerging area of research, especially in the Central and Eastern European region. The aim of our study is to address this research gap by investigating, with the help of statistical tools, the relationship between the familiness of the firms, their innovation activity, and their export activity on representative samples of Hungarian SMEs in the years 2017, 2020, and 2022. Our results suggest that the innovation activity of exporting Hungarian SMEs is more significant than that of non-exporting SMEs. However, the relationship between familiness and innovation activity is not uniform in the three analyzed years, and the relationship between familiness and export activity is not significant. The findings of this study, that firms' innovation and exporting activities can be mutually reinforcing, can be used by policymakers, curriculum developers in business education, and entrepreneurs. One of the main limitations of our research is that the 2020 and 2022 surveys were conducted after the first wave of the COVID-19 pandemic and the shock of the Russian–Ukrainian war, respectively; thus, the decisions of the firms could have been influenced by the unpredictability of the external environment.

Keywords: family business; export activity; innovation



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1. Introduction

The family enterprise is one of the oldest and still dominant types of business organisations worldwide (Sharma and Sharma 2011). Family enterprises play a particularly important role in the economy. The Global Entrepreneurship Monitor (GEM) 2020 Family Entrepreneurship Report, based on data from 48 low-, middle-, and high-income countries, found that “75% of entrepreneurs and 81% of established business owners co-own and/or co-manage their businesses with family members” (Kelley et al. 2020). Furthermore, according to the European Family Businesses (EFB), an association of national family business organisations in Europe, 60% of European businesses (around 17 million companies) are family businesses, providing 100 million jobs in the private sector (EFB n.d.).

The study of innovation in family businesses is an area of research that is growing rapidly. Based on a systematic review of the literature of the field, Akram et al. (2021) point out that researchers in this field have found mixed results regarding the impact of the family character of firms on innovation activity. The presence of the family can either enhance or inhibit the innovative activity of the firm depending on whether the risk-averse behaviour of family firms or, on the contrary, the long-term perspective and the desire to preserve and develop the family's wealth prevail.

Research on the innovation activities of firms is of strategic importance. Calabrò et al. (2019) point out that mainstream innovation research typically ignores the family nature of firms. It is important to carry out surveys that can be used to examine the impact of the

family nature of firms and, thus, to increase knowledge about the innovative capacity of firms. Research on the innovation activity of family firms has gained real momentum since 2009 (Calabrò et al. 2019). Studies published so far show that the approach of family firms to innovation differs from that of non-family firms. The specific characteristics of family firms influence both the way they invest in innovation and the way they exploit innovation (Akram et al. 2021).

The fact that Hungary is one of the worst performing “emerging innovators” in the European Union’s European Innovation Scoreboard justifies the study of this topic in Central and Eastern Europe, and in Hungary in particular. Although Hungary’s innovation score is above the group average, its performance is below the EU average, and the gap has been widening over the years (Directorate-General for Research and Innovation (European Commission) et al. 2022). In a country lagging behind in innovation, a deeper understanding of the innovation activity of enterprises is a particularly important issue. Furthermore, the regional disparities in research on this topic are highlighted by the fact that a systematic review of the literature on innovation in family businesses in the period from 2001–2019 did not identify any publications on the innovation activities of family businesses in Central and Eastern Europe (Akram et al. 2021).

The aim of the present study is to examine whether there is a statistically verifiable relationship between (1) the innovativeness of a firm and its internationalisation, as measured by export activity, (2) the innovation activity and the family status of the firm, and (3) the export activity of the firm and the family status of the firm, using a representative sample of small- and medium-sized enterprises surveyed with the same methodology in 2017, 2020, and 2022, respectively.

Our results contribute to the analysis of the relationship between innovation and export activity in two ways. First, the analyses are longitudinal, using three years of data, which increases the reliability of the results and highlights the rationale for repeating surveys and analyses in several consecutive years. Second, it examines the relationship between firms’ export activity and innovation activity in a Central and Eastern European country, Hungary, which is considered to be an under-researched area, thus adding to the accumulated knowledge on the subject, with results for the region. The results confirm the previously identified link between innovation and export activity and point to a number of future research directions. They provide further guidance for policy makers, curriculum developers in entrepreneurship education, and entrepreneurs.

The paper is structured as follows: after a theoretical summary on measuring innovation, defining family firms, and the innovation activities of family firms, the methodology used and the results obtained are presented. The paper concludes with a discussion and a summary of the main conclusions.

2. Theoretical Framework

In the following subsections, we will first briefly present the methodological background of the concept and the measurement of innovation, followed by a discussion of the possibilities and differences in the definition of family businesses. The section concludes with a summary of previous academic research on the differences between the innovation activities of non-family and family firms and the reasons for these differences.

2.1. Concept and Measurement of Innovation

The present paper is not intended to be a comprehensive analysis of innovation, so what follows is only a description of the framework for measuring innovation.

An internationally harmonised methodology for measuring innovation activities is provided by the OECD’s Frascati Manual (Annus et al. 2006), where the measurement of innovation is covered by the Oslo Manual, published jointly by Eurostat and the OECD (Makó et al. 2020). According to the fourth edition of the Oslo Manual, innovation is “a new or improved product or process (or combination thereof) that differs significantly from

the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)" (OECD/Eurostat 2018).

In our research, we classify innovation based on Schumpeter's classic division of innovation into five types: (1) bringing a new product or service to market, (2) improving the process of producing or selling a product or service, (3) exploring a new market, (4) exploiting a new source of raw materials or semi-finished products, and (5) creating a new industrial structure, also known as organisational innovation (Schumpeter 1980). However, this classification differs from both the third edition of the Oslo Manual (product innovation, process innovation, marketing innovation, and organisational innovation) and the fourth edition, which is significantly different from the aforesaid third edition (Makó et al. 2020).

The measurement of the innovation performance of enterprises and the indicators used could have a significant impact on the comparison of the innovation performance of family and non-family enterprises. According to De Massis et al. (2013), the technological innovation activity of family firms has typically been measured in three ways: (1) based on the innovation input, i.e., the resources involved in the innovation process (e.g., the amount of R&D expenditure), (2) based on the availability of external and internal resources involved in the innovation process (e.g., cooperation with external organisations), and (3) based on innovation output, i.e., the outcome of the process (e.g., the number of new products, services, patents, etc.).

It is easy to see that the availability of each indicator to researchers and the performance of enterprises of different activities and sizes measured by a given indicator can vary widely. For example, the number of patents is usually lower or even zero for smaller firms. Moreover, R&D expenditure in smaller enterprises is often not even reported in published simplified accounting statements. This also implies that qualitative methods may need to be prioritised when researching small and/or family enterprises.

Two further problems can be highlighted in relation to the innovation activity of enterprises. On the one hand, in some industries (e.g., semiconductors or electronic components), a significant proportion of firms can be considered innovative, while in traditional industries, there is much less room for innovation (Surdej 2016). On the other hand, according to the Community Innovation Survey (CIS), innovation performance in all EU Member States "increases in direct proportion to firm size, i.e., large firms are more innovative than SMEs" (Makó et al. 2020). According to data from 2016, the innovation performance quotient of large enterprises with 250+ employees and small enterprises with 10–49 employees is 1.3 in the best performing Member States (UK, Portugal), while in the case of Hungary, the figure is 2.5, well behind the EU-15 and similar to the new Member States (Makó et al. 2020, p. 11).

2.2. Definition of Family Firms

When studying family firms, it is essential to define the concept of "family firm." As there was no single definition of family firms in Europe that served political, economic, and academic purposes (Mandl 2008), the European Commission has drawn up a uniform definition of family firms on the basis of existing national definitions. Accordingly, a company can be considered a family business if (European Commission DG-ENTR 2009):

1. The majority of decision-making rights are in the possession of the natural person(s) who established the firm, or in the possession of the natural person(s) who has/have acquired the share capital of the firm, or in the possession of their spouses, parents, child, or children's direct heirs.
2. The majority of decision-making rights are indirect or direct.
3. At least one representative of the family or kin is formally involved in the governance of the firm.
4. Listed companies meet the definition of family enterprise if the person who established or acquired the firm (share capital) or their families or descendants hold 25 per cent of the decision-making rights mandated by their share capital.

We believe it is important to emphasise that the focus of this definition is on ownership, i.e., the right to control the company. This requires a relatively high ownership/voting share in *control-oriented* economies, such as the EU, while in *market-oriented* economies, a relatively low share of 5–10 per cent may be sufficient (Anderson and Reeb 2003).

Basco (2013) identified two approaches to family businesses based on 80 empirical studies on the performance of family businesses. The *demographic approach* applies characteristics, such as family ownership, family control, or even the involvement of family members. The *essence approach*, on the other hand, highlights the way in which the family business is governed and managed. The two perspectives are complementary: studies following the demographic approach focus on the differences in family resources and behaviour, while those following the essence approach highlight family involvement as an indicator of specific entrepreneurial behaviour (Hillebrand et al. 2020).

For the purpose of this study, we apply the definition of family business based on a detailed literature review by Kása et al. and adapted to the Hungarian context, whereby those businesses are considered family businesses that self-identify as a family business, or in which at least 51% of the business is owned by a family, and: (1) the family is involved in the management of the business, (2) family members are involved in the operation of the business as employees, or (3) the transfer of management and ownership is partly or fully within the family (Kása et al. 2019). The coexistence of several conditions in the definition of Hungarian family businesses was also examined by Drótos et al. (2019). The authors consider a company to be a family business if (1) it considers itself to be a family business and (2) there is dominant family control, or (3) the family share of ownership is at least 50 percent.

2.3. Innovation in Family Businesses

While there is consensus among researchers on the parallel emergence of innovation and internationalisation in the evolution of firms, there are divergent views in the literature on the causal link between them. According to the self-selection approach, innovative firms tend to export more than less innovative firms in order to maintain their competitive advantage. The learning-by-exporting (LBE) approach, on the other hand, posits the opposite relationship: firms that are active in international markets become more innovative by applying knowledge acquired abroad, in contrast to non-exporting firms (Alayo et al. 2021).

Braga et al. (2017) studied the innovation and internationalisation processes of family firms in parallel as strategies supporting the continuity and success of family firms. They highlighted the link between the innovation processes of family firms and their internationalisation. They explained that, for family firms, the use of innovation as a business strategy leads to a competitive advantage, the introduction of new production processes, the development of new products, or their adaptation to new markets. Furthermore, internationalisation is a way of surviving and of meeting the challenges of globalisation. Fernandez and Nieto (2005) found that family ownership has a negative impact on internationalisation measured by export activity for SMEs, while the internationalisation of firms owned by second and subsequent generations is stronger than that of first-generation family firms. The first hypothesis of our study tests the existence of the relationship between the innovativeness and export activity of firms in general:

H1. *Exporting firms are more innovative than firms not active in foreign markets.*

The innovation activity of family firms is often explained in the literature by the socioemotional wealth (SEW) approach (see, e.g., Wiseman and Gomez-Mejia 1998). According to this approach, family businesses make decisions *not only* on the basis of financial considerations, but also on the basis of conflicting objectives, such as social, family, or even emotional considerations (Miller and Le Breton-Miller 2014). Accordingly, the enterprise may even make an economically harmful decision in order to preserve SEW assets (Li and Daspit 2016), such as excessive risk aversion, preserving the family's reputation and social

position, or placing a less suitable family member in a leadership position. [Miller and Le Breton-Miller \(2014\)](#) distinguish between the concepts of restricted and extended SEW. In the restricted interpretation, the family business focuses on short-term goals, the present family's interests, and financial well-being. This implies conservatism in business, risk aversion, and lower levels of innovation and investment than what is possible. Meanwhile, within the family, it leads to nepotism and a strong attachment to family control. In contrast, extended SEW takes into account the interests of future generation(s), making the business less risk-averse, and implementing more substantial investments. Evidence shows that the two interpretations of SEW, together with the dominant coalition role of the family, can explain the innovative activity of the family firm ([Li and Daspit 2016](#)). The authors' results suggest that the presence of non-family members in a dominant coalition, due to their competences and networks, also promotes innovation activity under a narrow interpretation of SEW, as strong family control coupled with a long-term orientation also increases the risk-taking propensity of the firm and, thus, its innovation activity.

A study on innovation activity among family firms in Slovakia in Central and Eastern Europe emphasises that the family firms surveyed were first- or second-generation family firms, and firms with a transgenerational history beyond that were not included in the survey. The reason for this is that, as in other countries in Central and Eastern Europe, the establishment of private enterprises was only possible after the change of regime in 1989. An interesting finding of the study through an international comparison is that contrary to the trend in the Western world of a decline in the innovation performance of multi-generational family firms, the innovation performance of second-generation family firms in Slovakia is higher than that of first-generation family firms ([Urbaníková et al. 2020](#)). Historical events in post-socialist countries different from those in the West have also had an impact on the development of family firms in the region. Research in the Central and Eastern European context is particularly important, as it can shed light on the differences between the characteristics of family firms in the region and those outlined in the international literature.

Accordingly, based on the literature, we formulated the following hypothesis:

H2. *The innovation activity of family firms is more significant than that of non-family firms.*

The pursuit of export activities is a preferred form of internationalisation for family firms ([Pukall and Calabrò 2014](#)). The literature review revealed five arguments suggesting that the greater role of the family in management has a positive impact on internationalisation and, through LBE, on innovation ([Sánchez-Marín et al. 2020](#)):

1. Long-term orientation, which can offset risk aversion and have a positive impact on export activity and new product development (see more: [Gomez-Mejia et al. 2010](#));
2. Faster decision making, which can help seize opportunities more quickly;
3. Interests and preferences are more easily aligned, reducing information asymmetries;
4. Greater altruism among owners and managers can create an organisational culture of risk awareness and risk appetite that enables the pursuit of long-term growth strategies (see more: [Gomez-Mejia et al. 2003](#); [Schulze et al. 2003](#); [Zahra 2003](#));
5. It allows for more frequent interactions and more opportunities for learning (see more: [Veider and Matzler 2016](#))) while the parties speak a unique family language.

[Freixanet et al. \(2020\)](#) have shown that family firms apply their LBE knowledge more effectively in product innovation than non-family firms. However, the positive impact of the LBE process on innovation is more significant in the case of non-family firms. A preferred form of internationalisation for family firms is the pursuit of export activities ([Pukall and Calabrò 2014](#)).

Based on the above, we formulated the following hypothesis:

H3. *The familiness of firms is linked to their pursuit of export market activity.*

For all hypotheses (see Figure 1), our aim is to provide empirical evidence of the existence of a relationship between the two factors, but our examination does not extend to an analysis of the direction of causality.

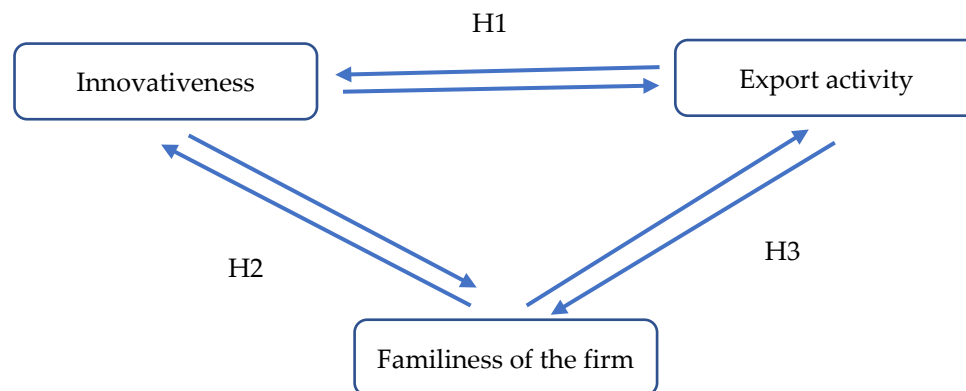


Figure 1. Logical framework of the hypotheses analysed.

3. Methodology

As in other post-socialist EU member states in Central and Eastern Europe,¹ there is a significant national economic risk in Hungary because the managers of firms founded during the regime changes of 1989–1990 are reaching retirement age around the same time (Mosolygó-Kiss et al. 2018). Accordingly, the Budapest LAB Office for Entrepreneurship Development of the Budapest Business School launched a comprehensive research programme in 2017 to study this group of entrepreneurs. Our results are based on representative surveys by the Budapest Business School on Hungarian SMEs in 2017, 2020, and 2022. The 2017 dataset consists of 382 items, while both the 2020 and the 2022 datasets each consist of 500 items. The surveys were conducted by the same professional market research company and financed from university funds. For all surveys, the total population refers to independent enterprises established in Hungary that (1) employ at least 3 persons and (2) have a turnover of HUF 50 million² but meet the European Union’s definition of an SME (European Commission 2003), i.e., (3) employ fewer than 250 persons, and (4) have an annual turnover of less than EUR 50 million or (5) a balance sheet total of less than EUR 43 million. All surveys provide the possibility of identifying family enterprises, for which we used the definition drawn up by Kása et al. (2019), as part of the research programme.

Based on the surveys, we divided the enterprises into three groups according to their family status. Enterprises that did not meet the above-mentioned definition by Kása et al. (2019) were considered non-family enterprises. Family businesses were then divided into two groups, where we considered a business a generational transitioning aspirant family business if (1) the founder’s child or spouse has shares in the business or (2) the management and/or ownership is planned to be passed on to a family member. In all other cases, the enterprise was considered to be a one-generation family business.

Export activity was examined with a dummy variable; however, this also means that the results are limited because they ignore heterogeneity among exporters.

Following the Schumpeterian classification, and also using dummy variables, we classified the firms’ innovation activity into five categories, as follows: (1) they made a significant development/improvement in the product/service, (2) they made a significant development/improvement in the process used to produce the product/service, (3) they entered a new market (consumer segment/geographical unit) with the product/service, (4) they explored new sources of raw materials, or (5) they introduced significant developments, improvements, or more efficient methods of operating the organisation. The number of innovation types—calculated as the sum of the five dummy innovation variables—was also examined as a separate variable. Analysed variables are described in detail in Table 1.

Table 1. Summary of variables used.

Variable Name	Survey Question	Scale of Measurement
IN01	Which changes were implemented in your business out of the followings in the last 2 years/A significant development/improvement in the product/service.	dummy
IN02	Which changes were implemented in your business out of the followings in the last 2 years/A significant development/improvement in the process used to produce the product/service	dummy
IN03	Which changes were implemented in your business out of the followings in the last 2 years/Entering to a new market (consumer segment/geographical unit) with the product/service	dummy
IN04	Which changes were implemented in your business out of the followings in the last 2 years/Exploring new sources of raw materials	dummy
IN05	Which changes were implemented in your business out of the followings in the last 2 years/Introduction of significant developments, improvements, more efficient methods of operating the organisation	dummy
INNOV_sum	Number of innovation types carried out in the last 2 years	scale, ranged between 0 and 5
PZ05	Does your business undertake any export activity?	dummy
TGA_CSV	Familiness of the business	categorical (0 = non-family business; 1 = family business without generational transitioning aspirations; 2 = family business with generational transitioning aspirations)

Source: own elaboration.

The hypotheses were tested using statistical methods with SPSS 29 software (see Table 2). Due to the fact that almost all analysed variables are categorical, robust statistical analyses were conducted, i.e., to test the independency of two variables using Pearson's chi-square test. This method, however, shows only the existence and the strength of the association relationship but not its direction. As the number of innovation types is measured on a ratio scale, one-way ANOVA analysis was conducted because this methodology allows us to analyse the difference of means of different groups, i.e., to state that the mean of innovation types implemented in the last 2 years is significantly higher than in the case of other groups.

Table 2. Summary of variables considered during the hypothesis testing and methods used.

Hypothesis	Methodology Used
H1: The innovation activity of exporting firms is higher than that of firms not active in foreign markets.	Pearson's chi-square test <i>t</i> -test
H2: Family businesses are more innovative than non-family businesses.	Pearson's chi-square test one-way ANOVA
H3: A link can be found between the familiness of enterprises and their activity in export markets.	Pearson's chi-square test

Source: own elaboration.

4. Results

Our results show that exporting enterprises are more likely to have implemented some type of improvement for all types of innovation and in all three years considered. The lowest odds ratio (1280) is found in 2020 for product/service development, while the highest is found in 2022 for raw material sourcing (see Table 3). It is important to stress, however, that the odds ratios do not show a consistent pattern across years or types of innovation, i.e., they do not allow us to identify a type of innovation that firms are consistently more likely to undertake.

Table 3. Odds ratio—the ratio of exporting to non-exporting enterprises with a given type of innovation.

	2017	2020	2022
Product/service has undergone a significant development/improvement	1.576	1.280	2.006
Significant development/improvement has been made in the process that produced the product/service	1.517	2.224	2.291
A new market was entered with the product/service (consumer segment/geographic unit)	2.483	2.216	1.314
New sources of raw materials were explored	1.555	1.626	2.867
Significant developments, improvements and more efficient methods have been introduced in the operation of the organisation	1.434	1.674	1.981

Source: own elaboration.

The correlation between the types of innovation undertaken by firms and their export activity was tested using Pearson's chi-square tests (see Table 4). These indicate that a significant—albeit based on Cramer's V indicators, positive but weak relationship—was identified for three types of innovation: (1) the process of producing a product/service, (2) the source of new raw material supply, and (3) organisational innovation, in all three years under study. For product/service innovation and new market entry, there was a significant relationship in only two of the three years, which was also weak according to Cramer's V indicators.

Table 4. Correlations between the types of innovation carried out by enterprises and the existence of export activity (2017, 2020, 2022).

	Pearson's Chi-Square			2017		Cramer's V		2022	
	2017 Asymptotic Sig. (2-Sided)	2020 Asymptotic Sig. (2-Sided)	2022 Asymptotic Sig. (2-Sided)	Value	Approx. Sig.	Value	Approx. Sig.	Value	Approx. Sig.
Product/service has undergone a significant development/improvement	0.005	0.257	0.019	0.165	0.005	0.051	0.257	0.105	0.019
Significant development/improvement has been made in the process that produced the product/service	0.015	0.000	0.007	0.148	0.015	0.167	0.000	0.121	0.007
A new market was entered with the product/service (consumer segment/geographic unit)	0.000	0.000	0.508	0.333	0.000	0.164	0.000	0.030	0.508
New sources of raw materials were explored	0.012	0.026	0.000	0.151	0.012	0.100	0.026	0.176	0.000
Significant developments, improvements and more efficient methods have been introduced in the operation of the organisation	0.035	0.020	0.028	0.132	0.035	0.104	0.020	0.098	0.028

Source: own elaboration.

The similarity in the number of types of innovation carried out by exporting and non-exporting firms was tested using *t*-tests. Our results show that exporting firms carried out significantly more ($p < 0.001$) types of innovation activities in all three years examined. Therefore, we accepted our Hypothesis H1, i.e., that there is a significant positive relationship between export activity and innovation activity. The direction of the relationship, i.e., whether it is easier to enter foreign markets through innovation or vice versa, requires further investigation.

However, it is important to note that the ratio of exporting enterprises steadily decreased: while in 2017, one-third of the enterprises said they had foreign market activity, in 2020, it was 15.1 percent, and in 2022, only 9.7 percent. In parallel, the number of types of innovation performed also decreased—while in 2017, exporting enterprises carried out, on average, 2.18 types of innovation activities, this decreased to 1.82 in 2020 and 1.30 in 2022 (see Table 5).

Table 5. Descriptive statistics of export activity and innovation types of businesses.

Year	Export Activity	Number of Businesses (n)	Innovation Types		
			Mean	Std. Deviation	Std. Error Mean
2017	yes	128	2.1797	1.55950	0.13784
	no	256	1.2891	1.43706	0.08982
2020	yes	75	1.8163	1.68870	0.19533
	no	422	1.1427	1.26313	0.06151
2022	yes	49	1.2954	1.13378	0.16277
	no	451	0.6588	0.95424	0.04491

Source: own elaboration.

The relationship between the familiness of the enterprise and innovation activity is not significant for any type of innovation, except for the 2020 data (see Table 6). Based on the 2020 data, the *p*-value is less than 0.05 in four cases: (1) product/service development, (2) entering a new market, (3) finding a new source of raw materials, and (4) organisational

innovation. However, even in these cases, the Cramer’s V indicator suggests that the relationship is weak.

Table 6. Correlations between the types of innovation carried out by enterprises and the familiness of the enterprises (2017, 2020, 2022).

	Pearson’s Chi-Square			2017		Cramer’s V		2022	
	2017 Asymptotic Sig. (2-Sided)	2020 Asymptotic Sig. (2-Sided)	2022 Asymptotic Sig. (2-Sided)	Value	Approx. Sig.	Value	Approx. Sig.	Value	Approx. Sig.
Product/service has undergone a significant development/improvement	0.506	0.004	0.858	0.059	0.506	0.147	0.004	0.858	0.858
Significant development/improvement has been made in the process that produced the product/service	0.357	0.475	0.719	0.073	0.357	0.055	0.475	0.719	0.719
A new market was entered with the product/service (consumer segment/geographic unit)	0.272	0.000	0.787	0.082	0.272	0.175	0.000	0.787	0.787
New sources of raw materials were explored	0.792	0.002	0.786	0.035	0.792	0.156	0.002	0.786	0.786
Significant developments, improvements and more efficient methods have been introduced in the operation of the organisation	0.889	0.047	0.226	0.025	0.889	0.111	0.047	0.226	0.226

Source: own elaboration.

Regarding the number of innovation types, the one-way ANOVA analysis shows similar results: the number of types of innovations performed is the same in the three groups studied based on 2017 and 2022 data. However, based on the 2020 survey, the expected number of innovations made differs between the groups. A Tamhane test for differences in variances shows that while the number of types of innovations carried out by non-family firms and family firms without generational transitioning aspirations is the same ($p = 0.810$), family firms with generational transitioning aspirations carry out significantly more types of innovation than both non-family firms ($p = 0.006$) and family firms without generational aspirations ($p = 0.002$).

Based on our results, we can neither accept nor reject Hypothesis H2, as the 2017 and 2022 data show no relationship between familiness and innovation activity, while the 2020 results show a relationship.

Based on the Pearson’s chi-square tests, the familiness of the enterprise and their export activity are not dependent on each other in 2017 and 2022 (respectively, $p = 0.719$ and $p = 0.470$), while the p value in 2020 is exactly 0.050. As such, conservatively, we assume the independence of the variables in this case, as well (see Table 7). Accordingly, we had to reject Hypothesis H3, i.e., the familiness of firms and their export activity are not dependent on each other.

Table 7. Correlation between the familiness of the enterprise and export activity.

		2017	2020	2022
Pearson’s Chi-Square	Asymptotic Significance (2-sided)	0.719	0.050	0.470
Cramer’s V	Value	0.052	0.110	0.055
	Approximate Significance	0.719	0.050	0.470

Source: own elaboration.

The results concerning firms' innovativeness and export activity are consistent with the findings in the literature. Although our results do not help resolve the debate between self-selection and learning by exporting theories, the existence of a relationship was confirmed by a longitudinal study of Hungary in Central and Eastern Europe, confirming the reliability of the results (Alayo et al. 2021). Regarding the issue of the innovativeness of family firms, in contrast to the results of Braga et al. (2017), our results are not clear across the years studied. In this case, further analytical work is needed to filter out the effects of exogenous factors (the COVID-19 pandemic, the Russian–Ukrainian war) that characterized the period studied. The presence or absence of a performance gap between the export activity of family firms and non-family firms also requires further investigation. Other areas to be explored in the future include filtering out the impact of external factors and exploiting the findings of Fernandez and Nieto (2005) that the internationalisation advantage for family firms applies to multigenerational family firms. The mixed results concerning the comparison of innovation and export performance of family and non-family firms can be explained by the application of Miller and Le Breton-Miller's (2014) theory of restricted and extended SEW, the practical implementation of which was probably also significantly influenced by the COVID-19 pandemic and the Russian–Ukrainian war.

5. Conclusions and Discussion

The aim of the present study was to examine the relationship between (1) firm innovativeness and internationalisation, as measured by export activity, (2) innovation activity and the familiness of the firm, and (3) the export activity and the familiness of the firm in a representative sample of SMEs in 2017, 2020, and 2022, respectively. The analysis was conducted using the Pearson's chi-square test to examine the relationship between category variables, and *t*-tests and one-way ANOVA analysis for the relationship between category and continuous variables, neither of which allows for the identification of causal relationships.

Our findings show that exporting firms were consistently more likely to engage in some form of innovation activity in all three years examined. Based on the Pearson's chi-square tests, this relationship is significant for all innovation categories and years examined, except for product/service innovation in 2020 and new market entry in 2022, although these relationships are weak based on Cramer's V indicators. In addition, exporting firms innovate to a more significant degree ($p < 0.001$); thus, we accepted our Hypothesis H1, i.e., there is a significant positive relationship between export activity and innovation activity.

The relationship between familiness and innovation is only significant for the 2020 survey and four types of innovation: (1) product/service development, (2) entering a new market, (3) finding a new source of raw materials, and (4) organisational innovation. This is confirmed by the fact that family firms with generational transitioning aspirations are significantly more innovative than both non-family firms ($p = 0.006$) and family firms without generational transitioning aspirations ($p = 0.002$) in the 2020 survey, while no similar difference is detected for the 2017 and 2022 samples. Therefore, we can neither confirm nor reject Hypothesis H2, as the relationship between the familiness of the business and innovation activity does not show a consistent pattern in the three years under study. In this respect, however, two things should be highlighted. First, this result shows that hypotheses concerning the functioning of enterprises cannot necessarily be confirmed even on the basis of surveys carried out by the same market research company, using the same methodology, and on the same sample. Second, the Hungarian market is vastly dominated by micro enterprises due to the fact that the socialist era between 1947 and 1989 interrupted the continuity of business traditions, including that of family businesses, and the relatively small size of the market did not allow for the development of larger businesses. Therefore, the differences between family and non-family businesses are much more blurred than in Western European countries. We believe this also emphasises the need to research businesses, including family-owned businesses.

As for our third hypothesis, i.e., that there exists a relationship between the familiness of the firm and export activity, we rejected it because the relationship is not significant

based on the 2017 and 2022 surveys, while the p -value of the Pearson's chi-square indicator calculated based on the 2020 survey is exactly 0.005. Thus, the familiness of Hungarian firms and export activity can be considered independent of each other.

The results could form the basis of a number of practical proposals. From a policy perspective, the link between innovation and export activity of SMEs is worth highlighting. When designing targeted support programmes for the sector, it makes sense to combine programmes supporting innovation and export activities, thus exploiting the synergies between the two.

A useful finding for entrepreneurship education practitioners is that the training programmes should emphasise the mutually reinforcing nature of innovation and export activities and illustrate this with practical examples and business case studies, which may help the future success of the entrepreneurs participating in training.

Finally, maximising the synergies between innovation and export activities and the resources available from the familiness of the firm is an important message for SMEs.

The results of this study suggest a number of future research directions for researchers in this field. Looking at several years of data, the relationship between the familiness of firms and innovation activity is not clear. It is important to clarify whether the lack of clarity in the relationship is due to external influences (the COVID-19 pandemic, the Russian–Ukrainian war) at certain points in the survey or the diversity of family firms. Family firms differ not only from non-family firms but also from each other. A promising line of research is to identify the characteristics that distinguish family firms that are active in innovation and export activities from their less successful counterparts in these areas. Once these factors have been identified, it is also worth exploring how less innovative and export-oriented firms can be developed. Another interesting line of research is the comparative analysis of innovation and export activities of first-generation and multi-generation family firms.

There are several limitations to our results. First, the 2020 survey was conducted immediately after the lockdown of the first wave of the COVID-19 pandemic, while the 2022 survey was conducted during the energy crisis and the Ukrainian war. This could have had a significant impact on both the export and innovation activities of firms. Second, the survey sample may contain variability that could significantly affect the results, despite the representativeness of the sample, the same market research company and methodology used. Third, the analytical methodology used only provides evidence of the existence of relationships, not the overall mechanism of the effect or the direction of the causal relationship.

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Notes

- ¹ In alphabetical order, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia, and Slovakia.
- ² Using the annual average exchange rates of the European Central Bank ([European Central Bank 2023](#)), this value corresponds to EUR 161.71 thousand, EUR 142.35 thousand, and EUR 127.78 thousand in 2017, 2020 and 2022, respectively, due to the continuous devaluation of the Hungarian forint against the euro.

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