

EXTERNAL DETERMINANTS OF FAMILY BUSINESS BEFORE AND DURING CORONACRISIS IN SLOVAKIA

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ABSTRACT

The aim of this paper is to identify significant differences in barriers in the segment of family-owned woodworking and furniture enterprises in Slovakia before and during the COVID-19 pandemic, based on an assessment of the current state of family-owned enterprises in Slovakia. Our objective was to gain an up-to-date perspective on family businesses concerning external barriers that directly affect family businesses through a questionnaire survey. The established hypotheses were tested using statistical methods: analysis of variance, Interval estimation of relative abundance, and Duncan's post-hoc test. Based on the findings obtained by the questionnaire, it was found that there are significant differences in importance between the barriers of the external micro and macro environment before and during the COVID-19 pandemic. The results contribute to science and practice and open possibilities for further research in the sector of Slovak woodworking and furniture family businesses.

Keywords: woodworking and furniture enterprises; family business; external barriers; pandemic; COVID-19.

INTRODUCTION

Family business is a prevalent way of doing business globally, which has a long tradition and represents an important field of industry in Slovakia with high potential. In the country, family businesses (FBs) account for 30 to 40% of GDP and provide employment to more than 40% of the population (Sharma, 2004). However, looking at family businesses from an EU perspective, we find that RPs provide employment for up to 60% of the population in EU member states (Sharma, 2004). Family businesses have not been anchored legislatively in Slovakia despite their demonstrable importance. A turning point in the development and support of FBs in Slovakia occurred in 2022 when a draft amendment to Act No. 112/2018 Coll. was submitted and adopted on 30 September 2022. No. 112/2018 Coll., 2022). The amendment to the Act entered into force on 01 July 2023, which made it possible to proceed to the address registration of the FB. This step will help economic development through targeted support and help the professional and academic community pursue adequate targeted research. Based on the adoption of the amendment above to the Act, an FB is defined as: a company, cooperative or natural person (entrepreneur) where at least two members of the joint family exercise directly or indirectly a majority of voting rights; one member of the joint family is a statutory body or a member of the statutory body;

two members of the joint family benefit economically from the business by a total of more than 50% of the after-tax profit; one member of the joint family is in an employment relationship with the natural person – entrepreneur who manages the business (Act No. 112/2018 Coll., 2022).

FBs bring many advantages as well as disadvantages that the family members involved need to be aware of, heed and be able to work with. The main support in FB is the family itself. Family members can help and support each other to have better and more cohesive relationships, complemented by a fair amount of honesty and discretion in managing their business (Frank *et al.*, 2023). However, the downside can easily become individual ambitions, damage to the reputation of the business, dealing with generational change along with property succession and a host of other things (Fondati *et al.*, 2014). Thus, family businesses can be characterized as complex systems characterized by their interconnectedness between family and business, with a constant balance to be sought between the two (Koráb, 2008; Machek, 2017).

The history of FBs in Slovakia is linked to many traditional crafts. The production of leather products, musical instruments, and woodwork is typical in Slovakia. The woodworking industry, in conjunction with the furniture and pulp and paper industries, represents an important part of industry in Slovakia that has high potential (Antov *et al.*, 2020). It is linked precisely to the fact that the Slovak Republic has wealthy sources of raw wood material, and a well-preserved and maintained nature. In spite of this, Slovak woodworking and furniture companies have faced a relatively long-standing stagnation in terms of innovation and investment. Most of the machinery and equipment used by the companies are outdated or do not meet many modern standards that have long been in place in other countries (Landscheidt, Kans, 2019). In today's dynamic world, innovation has become a driver that businesses must continuously work with, provided they want to move forward and improve their economic performance (Torun, 2007).

However, recent years have brought a new threat to both family and non-family businesses. The advent of a pandemic situation for business has meant enormous economic damage that many businesses have been unable to overcome. The impossibility of production due to the measures introduced and the number of changes to which businesses had to react suddenly caused considerable confusion for entrepreneurs. Family businesses were thus forced to concentrate more than ever on their survival and resist outside pressure. As a result of these changes, it has become essential for FBs to have a thorough understanding of their internal as well as their external environment, which has an impact on their performance, competitiveness and long-term sustainability (Halalisan *et al.*, 2020).

As stated by Maqin *et al.* (2017), the entrepreneurial environment is influenced by the determinants of the internal environment (management, finance, human resources, marketing, research and development), the external macro-environment (political and legal, economic, demographic, socio-cultural, technological, informational, ecological) and the external micro-environment (customers, suppliers, intermediaries, competitors, public). Every enterprise operating in a market economy is influenced by these groups of determinants (Hernández *et al.*, 2020). Most of the determinants of the external environment are immutable from the point of view of the involved enterprise (e.g. tax burden, legislative norms, etc.) or partially mutable (internal attitude towards competition, competitiveness) (Abdulaali *et al.*, 2019), and the EU member states are trying to eliminate their negative impact with regard to the barriers to the development of the enterprises themselves (Bragaru, 2015, Ionescu *et al.*, 2011).

External barriers represent the most significant threat to the company due to their impact on the company. They are not directly controllable, and they are often changed what greatly complicates efforts to regulate, adapt and mitigate them. The economic barriers of a company directly affect its financial situation (Curran, 2007; Kadocsa *et al.*, 2011). In times of crisis, it becomes necessary for the company to perceive the national economy of the country in which it operates, as well as the global economic situation. Pindiche *et al.* (2013) pointed out that the political situation can very quickly become one of the most significant barriers in business, because it directly affects the company's business activities. Expectations, beliefs, pressures, habits, traditions or desires of society affect the socio-cultural side of the company and thus create another new barrier (Papula *et al.*, 2015). Demographic changes in the country affect individual regions, what is subsequently reflected in the offer of goods and services. A company's competitiveness is also determined by its ability to invest and progress further. For this reason, technological and informational barriers are the base with which it is necessary to work, in the form of continuous implementation of new technologies, procedures and methods. Innovation cycles and activities in this sphere are directly related to ecological barriers, which have become more and more apparent in recent years. The company must work with the ecological standards of the state in which it operates and reconsider the implementation of measures that will go beyond the standards (Remišová *et al.*, 2015).

The aim of the present paper is to identify the significant external determinants of the macro- and micro-environment affecting entrepreneurship in the woodworking and furniture family business segment in Slovakia before and during the COVID-19 pandemic.

MATERIALS AND METHODS

The methodological approach of this paper was distributed among several logically organized parts. In the first stage, an analysis of secondary sources was carried out, which focused on the issue of FB in the context of the wood processing sector in Slovakia. In this part, the methods of analysis, synthesis, summarization, description, comparison, deduction and analogy were used. The following hypotheses were formulated based on the findings on family business, the COVID-19 pandemic and the external factors that affect the business of woodworking and furniture RPs in Slovakia (WWAFI):

H1: It is hypothesized that an unfavorable business environment was a key external barrier to the woodworking and furniture family businesses prior to the pandemic in terms of the macro environment.

Since its inception in 1989, family business in Slovakia has been significantly impacted by economic barriers. One of the most notable is the unstable business environment, a challenge that affects the operation of all businesses. Hošťák (2011) stresses that the state is often unaware of the consequences of its interventions in entrepreneurship. This often leads to a high administrative burden on businesses, difficult law enforcement and poorly formulated legislation, all of which discourage entrepreneurs and potential entrepreneurs from engaging in business and its development.

H2: The country's unfavorable economic situation is believed to have been a critical external barrier to the macro-environment of woodworking and furniture family businesses during the pandemic.

A well-functioning economy is crucial for sustaining and developing business. However, during the pandemic, the economy sharply stagnated. As Curran (2007) states, when looking at the economic situation as a barrier, we must realize that we cannot only

work with the situation in a given country but also need to consider the influences currently taking place in the global world economy.

H3: It is hypothesized that customers were a key external barrier to the business of woodworking and furniture family businesses prior to the pandemic from a microenvironmental perspective.

Customers are an existentially important part of a business. They generate revenue for the business, which is used to keep them satisfied and provide additional products and services. In the work, the author Remišová *et al.* (2015) stated that maintaining customer satisfaction is crucial for an enterprise. Thus, it is evident that an enterprise must make sure that it focuses mainly on satisfying its customer's need. In order to succeed in this, it is forced to know these needs thoroughly and to be able to adjust the further operation of the enterprise according to them.

H4: It is hypothesized that the key external barrier to woodworking and furniture family businesses during the pandemic from a microenvironmental perspective was the public.

Pindiche *et al.* (2013) define the public as a specific group of people who have any interest or intention to influence a company in a certain way. Thus, the public can directly influence the achievement of corporate objectives. During the pandemic, there was a huge demand for health and hygiene supplies. In practice, however, meeting such a high demand proved impossible. Thus, the public began to directly influence specific brands of hygiene and health products, resulting in increased production (and prices) to meet the needs of their customers.

The next part of the research was mapping the problems in the practice of woodworking and furniture enterprises by questionnaire method, building on the theoretical knowledge obtained so far. The uniform form of the questionnaire contained 16 questions divided into three main sections. The first section of the questionnaire focused on the identification and characteristics of FBs operating in the woodworking industry. Family businesses were identified using the new definition enshrined in the 2018 amendment to Law 112. If a respondent representing a particular company confirmed any of the above conditions, his/her business was classified as a family business. The second section was designed to identify significant differences in external barriers in the woodworking FB segment before and during the COVID-19 pandemic. The last section focused on expressing the evaluative position of woodworking FBs regarding the management of the pandemic situation and the use of company resources. The questionnaire was hosted on the Google Questionnaires platform and distributed through emails between February 2023 and May 2023. According to Finstat (2022), 3573 enterprises were active in the woodworking and furniture industry. Our research sample consisted of 2,300 family businesses that were randomly selected and operated in the woodworking and furniture industry based on SK NACE (code C16 and C31). The questionnaire return rate we were able to achieve was 9.43%.

The third phase focused on processing the data collected through the questionnaire survey. Microsoft Excel was used to process the results, and the data were further statistically and mathematically tested using Statistica 12. The formulated hypotheses were also tested using statistical methods. The verification of the above hypotheses was preceded by a check of the minimum research sample (n), which serves as the main assumption that allows the generalization of the research results to the entire population. The test was conducted using the following test characteristics:

$$n \geq \frac{z^2 \cdot p \cdot (1-p)}{c^2} \quad (1)$$

Where “z” is the standard normal deviate appropriate for the desired confidence level, “p” is an estimate of the population proportion, and “c” is the tolerable error level.

By applying the formula and then performing the calculation, it was found that 384 respondents (FBs) were needed for our research. Kandelová *et al.* (2010) point out that it is not enough to know only the size of all businesses in Slovakia. Still, for the purpose of further research, it is necessary to calculate a correction related to businesses in Slovakia. To achieve this correction, the following formula was used:

$$n_{korekcia} \geq \frac{n}{1 + \frac{n-1}{pop}} \quad (2)$$

The variable "n" is the sample size without considering the population, the variable "pop" expresses the population size (Kandelová *et al.*, 2010). The internal consistency of the questionnaire was verified using Cronbach's alpha coefficient, which is used as a scientific tool in inquiry methods. The formula (Cronbach, 1951) was used to calculate it:

$$\alpha = \frac{k}{k-1} \times \left(1 - \frac{\sum_{i=1}^k s_i^2}{s^2} \right) \quad (3)$$

All Cronbach's alpha values equal to or greater than 0.7 indicate sufficient reliability of the questionnaire. To test hypotheses H1 to H4, Interval Estimation of Relative Abundance Proportion was used. This interval provides a numerical range that tells us whether the estimated parameter falls in our base set with a certain probability. The interval is expressed by the following formula (Ali and Bhaskar 2016):

$$P \left[p - z_{1-\frac{\alpha}{2}} \sqrt{\frac{p(1-p)}{n}} < \pi < p + z_{1-\frac{\alpha}{2}} \sqrt{\frac{p(1-p)}{n}} \right] = 1 - \alpha \quad (4)$$

Where "γ" represents the significance level, "α" is estimation error, "z" is the critical value of standard normal distribution, "π" is the estimated population's frequency, "n" is the sample size and "p" is the sample frequency (Pacáková *et al.*, 2009). The second method used to test the hypotheses was the Analysis of Variance (ANOVA), which allowed us to compare means when two or more base sets were compared. Therefore, it can be determined whether the null hypothesis can be accepted or rejected (Pacáková *et al.*, 2009). The test characteristic F is expressed by the formula:

$$F = \frac{MSA}{MSE} = \frac{\frac{SSA}{k-1}}{\frac{SSE}{n-k}} \quad (5)$$

MSA represents the mean square model for factor A, MSE represents the mean square error for random factor E, SSA is the sum of between-group variation, SSE is the sum of within-group variation, and the k - 1 and n - k relationships are the individual numbers of degrees of freedom (Pacáková *et al.*, 2009). Duncan's post-hoc test directly followed the Analysis of Variance. Using it allowed us to see specific differences between pairs of means. A statistically significant difference is confirmed provided the following formula:

$$\bar{y}_i - \bar{y}_j \geq D_\alpha \sqrt{\frac{S_r^2}{n}} \quad (6)$$

The parameter D_α represents the Duncan test value for a given number of differences, S_r^2 expresses the residual variance, "n" is the ensemble size, and Y_i, Y_j are the group means

(Kucuk *et al.*, 2016). The detailed results of the questionnaire are described in the next section of the paper.

RESULTS AND DISCUSSION

A total of 443 family businesses operating in the woodworking and furniture industry, according to the SK NACE classification (C16, C31), participated in the questionnaire survey. At the same time, the questionnaire survey managed to involve FBs from all municipalities of the Slovak Republic. The FBs were selected randomly from a pre-acquired database of Slovak family businesses (FINSTAT, 2023) with the condition that they identify themselves as an FB according to the newly adopted definition of the RP in Slovakia valid from 1 January 2023. Most respondents indicated that their family business was classified as either a micro business (35.48%) or a small business (46.65%). Most operate as a limited liability company (57.57%) or as a sole proprietorship (36.48%). Their most common age is 6 – 15 years (43.67%) and 1 - 5 years (27.29%). They are mainly engaged in local business (35.73%) and district business (21.59%), while they mostly come from the Bratislava region (22.30%) and the Banská Bystrica region (19.60%). Their business sector is mainly focused on trade (25.80%) and accommodation and catering services (20.60%). The presented research worked with a margin of error of 5% ($e=0.05$) along with a confidence level of 95% ($z=1.96$), while the sample size ($N=3573$) was known to us. Based on the previous data, the minimum research sample was calculated to be 384 Slovak family businesses operating in the WWAFI sector. A total of 443 respondents participated in the survey, thus, the condition of the minimum research sample was met, and the results can be generalized to the entire base set, i.e., to the entire population of enterprises operating in the woodworking and furniture sector. The high internal consistency of the scale used for the scaled items of the questionnaire is evidenced by the calculation of Cronbach's alpha with a value of 0.98.

Hypothesis H1 hypothesized that the key external barrier to woodworking and furniture family businesses prior to the pandemic in terms of the macro-environment was the existence of an unfavorable business environment, i.e., political-legal barriers. To test this, 95% interval estimates with 95% confidence intervals of the proportion of enterprises in the target population for which each external environment barrier was a key obstacle (Table 1) was calculated.

Tab. 1 Interval estimates of barriers to the external macro-environment – pre-pandemic (95% confidence interval).

	Before the pandemic
Economic barriers	(9% to 15%)
Political and legal barriers	(11% to 18%)
Socio-cultural barriers	(17% to 25%)
Technological and information barriers	(15% to 23%)
Demographic barriers	(17% to 25%)
Ecological barriers	(17% to 25%)

In Table 1, it was observed that the intervals with the highest frequencies, i.e., from 17% to 25%, were quantified for socio-cultural, demographic and ecological barriers. These categories represented key barriers for Slovak FBs operating in the woodworking and furniture industry. The assumption from hypothesis H1 that the key problem of FB in the pre-pandemic period in terms of the external macro-environment was the unfavourable business environment could not be confirmed. The results indicate that before the pandemic,

Slovak FBs operating in the woodworking and furniture sector focused more on demographic determinants, building a good communication base for customers in terms of the social aspect and ecology associated with social responsibility.

Hypothesis H2 was related to external macro-environmental barriers during the pandemic. It hypothesized that poor economic conditions, i.e., economic barriers, were a key external barrier to woodworking and furniture FBs during the pandemic period.

Following an interval estimate of the proportion of businesses in the target population with 95% confidence, it was found that political-legal barrier is the most frequent, with estimates ranging from 32% to 41% of businesses, and differing only slightly from the other barriers (Table 2).

Tab. 2 Interval estimates of barriers to the external macro-environment – during the pandemic (95% confidence interval).

	During the pandemic
Economic barriers	(32% to 41%)
Political and legal barriers	(33% to 42%)
Socio-cultural barriers	(31% to 40%)
Technological and information barriers	(31% to 40%)
Demographic barriers	(24% to 33%)
Ecological barriers	(25% to 33%)

The estimate was quantified at 32% to 41%. for our expected economic barriers. Socio-cultural and technology-information barriers can also be considered significant, ranging from 31% to 40%. It was confirmed hypothesis H2 based on the above. The phenomenon of family business is deeply rooted in modern countries' economies. Therefore, FB can be considered a driving force of the economy, which should dynamically progress in all circumstances. A glimpse of this progress can be seen in Table 1, where, during the pandemic situation, businesses shifted their gaze from the socio-cultural aspect, demography and ecology to the most fundamental – survival, symbolised by a focus primarily on the politico-legal and economic barriers that the RPs were forced to overcome.

Hypothesis H3 posits that customers were the key external barrier to woodworking and furniture FBs prior to the pandemic from a microenvironmental perspective. Table 3 presents how people perceived the importance of individual external microenvironment barriers from the pre-pandemic period.

Tab. 3 Interval estimates of barriers to the external microenvironment – pre-pandemic (95% confidence interval).

	Before the pandemic
Customers	(11% to 18%)
Suppliers	(11% to 18%)
Intermediaries	(12% to 19%)
Competitors	(12% to 19%)
Public	(10% to 17%)

Our assumption worked with a customer barrier (11% to 18%) that differs only marginally from the most numerous estimates: intermediation and competition barriers (12% to 19%). Thus, hypothesis H3 was confirmed, woodworking and furniture FBs perceived the customer barrier as significant before the pandemic. It can be primarily due to the continuous development of the business, competitive pressures and the desire to take as strong a position as possible in the market, with the key in this case being a satisfied customer. Hypothesis H4 was rejected. The public is seen as the key external barrier to the business of woodworking and furniture FBs during a pandemic in terms of the macro environment.

Tab. 4 Interval estimates of barriers to the external microenvironment – during a pandemic (95% confidence interval).

	During a pandemic
Customers	(31% to 41%)
Suppliers	(34% to 44%)
Intermediaries	(27% to 36%)
Competitors	(30% to 39%)
Public	(29% to 38%)

Although 29% to 38% of Slovak FBs perceived this barrier as the most significant, it could not be accepted because the most numerous estimate, in this case, was the barrier of suppliers, i.e., 34% to 44%, together with the barrier of customers, i.e., 31% to 41%, as presented in Table 4.

The above overview of barriers before and during the pandemic period shows their strong influence on the functioning of Slovak woodworking and furniture enterprises, especially during the pandemic period. This increase can again be attributed to the fact that during the pandemic, family-owned enterprises tried to focus primarily on survival, which ensured that they strengthened good business relations with their suppliers and maintained a good reputation and image in the eyes of their customers.

If we look at the questionnaire survey results, we can see that the pandemic has brought significant differences in the perception of barriers to family business (Kraus, 2020). According to the author Ward (2016), family businesses represent a space that is agile enough to withstand any crisis situation, provided the use of proper and controlled management of the FB, the existing stability in the family and the use of the advantage of solid financial security (Azizi *et al.*, 2021). The pandemic brought chaos to businesses, and businesses were unprepared. The results of this research highlighted that family as well as non-family businesses were forced to think differently during the pandemic. Herman and Nistor (2021) argue that during the pandemic, businesses were in a state where they were either able to direct all their resources and efforts towards maximizing the possibility of survival or the businesses failed to cope with the impacts that the pandemic created, which brought them significant damage. The woodworking and furniture sectors were also quite severely constrained. The impossibility of extraction and production, the forced shutdown of machinery and equipment, the high costs of paying employees who could not work and the subsequent lay-offs caused a considerable imbalance. The situation has profoundly shaken supply chains, resulting in disrupted relationships. However, family businesses have gone through many challenges over the years, which they have overcome successfully. In order to withstand the adversity, RPs have had to refocus their attention very quickly on what is important in business. According to Habánik *et al.* (2016), problems such as: administrative burden on businesses, difficult law enforcement and poorly formulated legislative regulations were significant obstacles to entrepreneurship, which could not be confirmed in our research (hypothesis H1 was rejected). In a relatively calm market environment, businesses can develop in a direction that suits them or they choose. As Pakkanen (2012) stated, a business must constantly work with its internal and external environment. The environment of the enterprise is the most important variable that influences it and determines its survival. An enterprise cannot afford to be idle if there is an unpredictable economic situation. Still, it must monitor external macro-influences in the world economy and its environment (Curran, 2007). In terms of the results of the questionnaire survey, this position was confirmed (hypothesis H2 was accepted as valid). However, as one of the market actors, a business, could not function if it had no one to offer its products and services to. Thus, customers become a significant factor for the enterprise,

enabling it to move forward. According to the author Banuelas (2002), customers are a key component of the enterprise and play a fundamental role in its functioning and success, which it was able to confirm by adopting hypothesis H3. However, from an external micro-view of the enterprise, it cannot be precisely determined that only one determinant is the most important. Based on the results of our research, all barriers to the external microenvironment are proportionally equally important in the pre-pandemic period. Authors Jasra (2011) and Maqin *et al.* (2017), state that it is essential to be aware of the barriers in question and their impacts, which have been critical to the long-term sustainability of FB over many generations. This statement is underlined by Neykov *et al.* (2021), who state that enhancing management practices and investing in research and development activities can lead to greater economic efficiency and long-term sustainability. The sudden change in the situation brought about by the pandemic resulted in significant upheaval in all areas of people's social lives. People began to become more and more vocal, causing businesses to respond very quickly and flexibly to what the public was demanding. However, businesses only vaguely understood all the pitfalls that the pandemic situation would bring. In a short time, they had to secure and strengthen their relationships with suppliers and customers, as our research has shown (hypothesis H4 was rejected). Despite the pandemic, the FBs managed to cope with the situation and thus strengthened their business by finding new strategies. Therefore, by implementing the right strategy in the industry, we can eliminate and mitigate many undesirable influences. Finally, regular monitoring of the international and national macro and microenvironment as well as the company's anticipation of possible market changes are fundamental steps that family businesses should take to avoid the most significant external barriers.

CONCLUSION

A properly set-up enterprise and carefully monitoring its internal and external environment are the keys to ensure the survival of Slovak woodworking and furniture family businesses. The pandemic has brought new challenges to the local, national, and global levels that the enterprise has to face. This period brought many uncertainties, trials, an uncertain future, and many opportunities for adaptation and growth. Businesses had to find new ways to communicate, collaborate, and manage the situation. A capable business can cope with and overcome the crisis through consolidation and a thorough understanding of its external macro and microenvironment. As the research results showed us, the significance of individual barriers in the family business changes with the rapid change of the situation. FBs have to consider very wisely what they will and will not give priority to. Complicating matters in this case may be the need to accommodate the family on the one hand, the customers on the other, and the goals set by the business on the third. The agility of the enterprise as a permanent ability to be flexible and prepared for different scenarios that may arise has become more severe than ever. The challenges associated with the pandemic remind us how important it is to have strong values, a culture, and the right strategy in the FB sector to withstand the unexpected. At the same time, family businesses have an opportunity to focus on social responsibility and strengthen their relationships with other businesses and the community, which can create a massive advantage in the future. Thus, family businesses should strive to continuously remove barriers that could burden the business in a crisis.

A limitation (restriction) of the research presented is that the results cannot be generalized to all SMEs (micro, small, and medium enterprises) in the country. Still, the

research is only relevant to family businesses in the woodworking and furniture industry. Another limitation is using a quantitative research method, which makes it possible to identify specific factors and barriers enterprises had to overcome during the Covid crisis. Further research will therefore focus on a qualitative study on the ability of family and non-family SMEs to cope with unpredictable changes and the barriers needed to build their agility.

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ACKNOWLEDGMENT

This research was supported by Slovak Research and Development Agency, projects number APVV-20-0004, APVV-21-0051, APVV-22-0238, APVV-23-0116 and also, the paper is a partial result of the grant scientific projects VEGA no. 1/0011/24, VEGA no. 1/0333/22, IPA - Building agility in wood-processing enterprises and IPA - Research on the sustainability of family business in the wood-processing and furniture manufacturing industry in Slovakia.

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