

PREREQUISITES FOR THE DEVELOPMENT OF THE WOOD-PROCESSING FAMILY ENTERPRISES

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ABSTRACT

The aim of the paper is to determine the prerequisites for the future sustainable economic development of the wood-processing family enterprises in Slovakia focusing on ecological mobility, certification, and strategic management. 3,500 wood-processing enterprises in Slovakia were addressed with a questionnaire. The validity of three assumed hypotheses were evaluated by applying the relevant statistical methods. The prerequisites for the development of the wood-processing family enterprises consist of removing the barrier of undervalued strategic planning and management, as well as the entire branch, and focusing on the needs of the family business as the most represented segment. It is necessary to support the communication of beneficial attributes and advantages of the industry in question. At the same time, space is being created for more detailed research in the field of certification and its impact on the growth of consumer demand.

Key words: wood-processing enterprises, family business, strategic management, sustainability.

INTRODUCTION

Almost 70,000 people work directly or indirectly in the forest-based industries in Slovakia (KOLESÁROVÁ *et al.* 2021). Renewable natural raw material – wood is considered to be its ecological and environmental pillar, which is used in its activities and on which it depends (DUDIAK and DZURENDA 2021). The stock of wood in the forests of the Slovak Republic has an increasing tendency. The growth of wood in the forests of the Slovak Republic continuously exceeds the logging amounts, therefore forest management is sustainable. Forestry fulfils its ecological objective, while more than 70% of forests are certified (KOVALČÍK 2017). According to the authors ŠMÍDA and DUDÍK (2014), the most vulnerable link in the chain is considered to be the wood-processing enterprises, which is why they were given more detailed attention.

The woodworking and furniture industry, together with the pulp and paper industry, form a uniform sector of the wood-processing industry (WPI) in Slovakia, which has a long tradition and has hitherto unused potential (MORESOVÁ *et al.* 2021; MALÁ *et al.* 2019). The rich domestic base of raw material, processing capacities (especially in the case of coniferous log processing), a stable share of the industry in the field of industrial diversification (approximately 2.5% over a decade) are some of the many predispositions. Long-term problems of the industry are the lack of support and development strategy, lack of targeted

modernization of technology and machinery, low attractiveness of the industry from the point of view of investors and entrepreneurs themselves, insufficient product finalization, WPI enterprises act as subcontractors of semi-finished products for foreign companies, slow growth of competitiveness (MALÁ *et al.* 2019; KRIŠŤÁKOVÁ *et al.* 2021). At present, more than 5,300 business entities are operating in this segment, which follows the tradition of WPI in Slovakia, compared to the European average, which is more than 397 thousand business units (19.6% of all businesses) (KRIŠŤÁKOVÁ *et al.* 2021). The level of forest cover in Slovakia, which reaches 41.2% and has been growing exponentially over the years, also contributes to their prosperity (MORAVČÍK *et al.* 2021).

Wood-processing enterprises are sensitive to changes in demand, subject to market fluctuations and also low capital readiness (PALÁTOVÁ and DUDÍK 2018). The biggest barrier is considered to be the low level of the added value of the final outputs (VETRÁKOVÁ and SEDLIAČIKOVÁ 2021). A comprehensive strategy for the development of wood-processing industry (WPI) as part of the strategic policy of the state is absent (MORAVČÍK *et al.* 2021). According to a study carried out by the SLOVAK BUSINESS AGENCY (2020), the share of family businesses (FBs) in all industries in Slovakia is estimated to be between 60% and 80%. The segment of family businesses has a majority representation and is characterized by several specific features that, depending on the point of view, can be perceived as both positive and negative (RAMADANI and HOY 2015). FBs in Slovakia produce 30 to 40% of GDP and provide 40% of employment (PERÁČEK *et al.* 2020). The data presented by the European National Association representing FBs in the EU are even more favourable. GDP indicator is estimated at 40% and the employment rate at up to 60% (SHARMA and JOSHI 2017). The professional public has long drawn attention to the need for the identification of FBs and their subsequent registry. For the branch of the woodworking and furniture industry, it can be stated that the awareness of the contribution of the definition itself is not sufficient (KOCIANOVÁ *et al.* 2022).

Therefore, it is important to emphasise the issue of family business support. Its global importance is evidenced by its share in the creation of GDP (more than 70%) and employment (50% to 80%). The absence of a legal definition of a family business in the legislation of the Slovak Republic is still a topical issue, as shown by studies conducted under the auspices of the Slovak Association of Small and Medium-Sized Enterprises and Self-Employed Persons, Slovak Business Agency and National Business Centre. Neglecting the essence of family businesses occurs despite current findings that they can respond more flexibly to crises and incoming changes and restrictions (AMORE *et al.* 2022). Savings and low indebtedness (financial flexibility) were one of the main points that were in favour of FBs situation (FAHLENBRACH *et al.* 2021; MINÁROVÁ *et al.* 2020). Authors ALBUQUERQUE *et al.* (2020) agree that FBs engaging in environmental and social activities perform better during crises due to their more loyal customer base. As relatively stable employers, FBs achieve more favourable results also due to loyal employees who, in connection with their families, better withstand stress, accept alternative ways of working and thereby maintain higher efficiency and productivity (AMORE *et al.* 2022; SHAN and TANG 2022; MINÁROVÁ *et al.* 2021). The available data of domestic studies carried out under the auspices of the Slovak Business Agency show the majority representation of family businesses in all sectors of the economy of the Slovak Republic according to the definition, which was also used in this survey. Even in Slovakia, FBs play a significant role in the development of regions and increasing employment, especially in the areas with a lack of foreign investments. It can be emphasized that WPI plays the same role in Slovakia (SEDLIAČIKOVÁ *et al.* 2021; KRIŠŤÁKOVÁ *et al.* 2021). It also belongs to traditional industries with long-standing enterprises, uses renewable natural raw material, its products often meet many strict certification conditions (MELICHOVÁ *et al.* 2022; SEDLIAČIKOVÁ *et al.* 2021; MYSKOVA and

HAJEK 2020). This leads to a high contribution of wood-processing FBs to the national economy (MELICHOVÁ *et al.* 2022). As it results from domestic research (MORESOVÁ *et al.* 2021), it is necessary to support the growth of FBs in Slovakia, which will lead to an increase in the efficiency and productivity of the global economy.

The potential of the WPI is wide and has not yet been fully used in Slovakia. As the authors AMORE *et al.* (2022), SHAN and TANG (2022) claim, family businesses are a stabilizing element of the economy even in times of crisis, as they can withstand them easier. In the period of the culminating global pandemic of COVID-19, support for WPI was recorded in terms of increased demand for its products. The changes included the increased demand for furniture (wardrobes, beds and tables), office furniture, paper (packaging, office), personal hygiene products based on paper and also biomass (CHEN and YANG 2021; BARČIĆ *et al.* 2021; HAYES and MORGAN 2020; KRIŠTOFÍK and MEDZIHORSKÝ 2022).

The aim of the presented paper is based on a comprehensive survey of wood-processing enterprises in Slovakia using the questionnaire with a focus on family business, ecological mobility, certification and strategic management, to determine the prerequisites for the future development of wood-processing family enterprises in Slovakia considering the absence of a strategy for the development of the sector within the industrial policy of the Slovak Republic.

METHODOLOGY

The methodological procedure of the paper was divided into five phases. The first of them was providing the theoretical framework based on the available secondary sources using the methods of analysis, description, comparison, analogy, summarization, synthesis, deduction and induction. Based on the published outputs of the authors on the subject of the WPI and family businesses, the following hypotheses were formulated:

H1: The majority of wood-processing enterprises in Slovakia perceive themselves as more environmentally friendly than enterprises from other industries.

According to the statements of the authors VIDOVIC and SOLAR (2018), KRIŠŤÁKOVÁ *et al.* (2021), GRZEGORZEWSKA and SEDLIAČIKOVÁ (2021) and MELICHOVÁ *et al.* (2022), the use of renewable natural raw materials helps to fulfill ambitions in the direction of environmental management sustainability, which corresponds to the EU goals of the share of renewable natural resources (at least 20%) as inputs into the production process. The forestry and forest-based industries are based on the use of renewable natural raw materials, which assumes that Slovak wood-processing enterprises perceive their contribution to the ecological progress of the country and the economy in connection with the goal of business sustainability. The situation regarding ecological progress and support for environmental protection has been notable in recent years. This provides a space for the conditions of the WPI to use its ecological potential.

H2: The rate of certified enterprises in the WPI in Slovakia reaches the majority share.

The forestry and forest-based industries use data on the stock of wood in the forests of the Slovak Republic, which has an increasing tendency. According to KOVALČÍK (2017), forest management is sustainable. Forestry fulfils its ecological purpose, while more than 70% of forests are certified. For the second part of the industry, which covers the wood-processing enterprises, there is no information on the degree of certification. According to the authors GEJDOŠ and DANIHELOVÁ (2015), SHARMA and JOSHI (2017) and SACHDEVA *et al.* (2015), many wood-processing enterprises meet several strict certification conditions, but

their exact number is not available. For this reason, the examination of the issue is the key in finding another pillar of the development of the wood-processing family enterprises.

H3: The enterprises of the WPI in Slovakia have and implement development strategies in their business activities.

There is a significant prerequisite that any strategy in the company would have an impact on development and growth (TAPERÁ 2014; YULIANSYAH *et al.* 2017). A certain advantage provided by any strategy in the company is readiness, growth of business performance and thus gaining a competitive advantage over companies without a specific strategy (ITTNER *et al.* 2003). It is necessary to verify the validity of the conditions of wood-processing enterprises. The absence of a comprehensive strategy for the development of the sector within the economic policy of the state plays an important role (MORAVČÍK *et al.* 2021).

The research questioning method in the form of an electronic questionnaire has been chosen to fulfil the condition of the implementation of a comprehensive survey of wood-processing enterprises in Slovakia (KOZEL 2006). In the second phase, a questionnaire was compiled based on the acquired theoretical knowledge. The final form of the questionnaire contained 29 questions and resulted in the implementation of a pre-test on a sample of 30 respondents (BAČÍKOVÁ and JANOVSÁ 2019). The structure of the questionnaire consisted of 5 sections (identification questions, family businesses, non-family businesses, WPI in Slovakia, and industry development). When a respondent on behalf of the company confirmed the validity of any of the characteristics of a family business (share of stocks of the family at least 50%, ownership share of the family, confirmation of the influence of the family on management and control functions), it was evaluated as FB. When the respondent stated for the enterprise that it does not meet any of the listed characteristics, it was identified as non-family and the respondent was redirected to the non-family enterprises section. The survey was carried out in two phases from September 2020 to November 2021. The questionnaire was placed on the Google forms domain and its distribution was directed to the email contacts of wood-processing enterprises, which were obtained through the business contacts database. This is managed by FINSTAT (2022) and in the surveyed period, 5,343 wood-processing enterprises were active in the sector. Within the third phase (survey implementation), 3,900 enterprises were addressed with a return rate of 14.85%. The addressed enterprises were included in the research sample based on a random regional selection according to the division of the SK NACE classification of economic activities (C16, C17 a 31) (PACÁKOVÁ 2009). The output of the fourth phase was the processing of data and results obtained by conducting the survey. Firstly, the data matrix was compiled in the Microsoft Excel program to obtain summary outputs, which were subsequently mathematically and statistically tested in the Statistica 12 program. Before the verification of the validity of the assumed hypotheses, a verification of the requirement of the minimum size of the sample set (n) was carried out. This is a condition for the possibility to generalize the obtained data to the entire population of wood-processing enterprises. It was determined by the following relationship for calculation under conditions of an acceptable margin of error of 5% ($e=0.05$) and confidence level of 95% ($z=1.96$) with a known size of the basic set ($N=5343$) and parameter $p=0.5$ (FAERON 2017):

$$n \geq \frac{p \times (1-p)}{\frac{e^2}{z^2} + \frac{p \times (1-p)}{N}} \quad (1)$$

The value corresponds to the number of 359 received questionnaires or addressed companies, which was fulfilled. The number of addressed enterprises was 579, of which 404 were family businesses. The representativeness of the sample set was verified through the Chi-square test (Goodness-of-fit test) according to two characteristics of the base set. These

were the categorization in the division according to the SK NACE classification and the self-governing region in which the company is located. The goodness-of-fit test serves to verify the fit of the empirical distribution, while the test characteristic is as follows (PACÁKOVÁ 2009; KOZEL 2006):

$$\chi^2 = \sum_{i=1}^k \frac{(X_i - Np_i)^2}{Np_i} \quad (2)$$

The Cronbach's alpha coefficient (CRONBACH, 1951) is used to verify the internal consistency of the questionnaire (reliability), as an applied tool of the scientific survey questioning method. The threshold value of the coefficient α is recommended at a minimum level of 0.7 so that it is possible to claim that it makes sense to work with the obtained data and that the respondents understood the questions. The test characteristic is given below:

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

After verification of the minimum sample size, its representativeness and the relevance of the research tools, the validity of the assumed hypotheses was carried out, based on the Relative Frequency Hypothesis Test with the following test criterion, while testing at a significance level (α) of 5%, i.e., the above is claimed with a confidence of 95% (ALI and BHASKAR 2016; PACÁKOVÁ 2009):

$$\mu = \frac{f - \varphi_0}{\sqrt{\frac{f \times (1-f)}{n}}} \quad (4)$$

In connection with each of the assumed hypotheses, a two-sided Interval estimate of relative frequency was also applied to obtain more detailed analyzes (PACÁKOVÁ 2009; ALI and BHASKAR 2016). The test criterion is as follows:

$$f - u_{\frac{\alpha}{2}} \sqrt{\frac{f(1-f)}{n}} < \varphi < f + u_{\frac{\alpha}{2}} \sqrt{\frac{f(1-f)}{n}} \quad (5)$$

The detailed results of the survey were processed in the further part of the paper using descriptive statistics and, in the last fifth phase, they were compared in a discussion with the previous findings of other authors. For relative simplicity and clarity, frequency tables were used.

RESULTS AND DISCUSSION

A total of 404 family businesses in the WPI category according to the SK NACE classification of economic activities (code C16, C17 and C31) participated into the survey of wood-processing enterprises in Slovakia. Enterprises from all self-governing regions were equally represented in the research sample. They belong to the categories of the micro (62.13%) and small (27.48%) enterprises. They mostly operate for a long-term period (6 or more years 94.56%). They include mainly limited liability companies (60.15%) or trading licenses (32.18%). They perform their activities at the national (43.07%) to the international level (40.35%). After performing the goodness-of-fit test, it can be concluded that the sample set is representative according to the two observed characteristics (division of SK NACE classification $p=0.117$; self-governing region $p=1.000$). The distribution of enterprises in the sample corresponds to the distribution of the population of wood-processing enterprises in Slovakia. Based on the results of the Cronbach's alpha (α) coefficient for determining the reliability limit of the questionnaire, its consistency was confirmed at the $\alpha=0.73$ level based on the values of Items Variances (18.29) and Variances of Total Score (49.29). First of all, it is necessary to emphasize that the majority of the addressed wood-processing enterprises

in Slovakia are family-owned (according to the authoritative definition given by the Slovak Business Agency), as shown in Tab. 1. So far, no study of the wood-processing industry with a connection to family business has been published in Slovakia (KOCIANOVÁ *et al.* 2021). The percentage of FBs in the research sample reached the level of 69.8%. On this basis, a one-sided relative frequency hypothesis test (Tab. 2) and an Interval estimate of the relative frequency (Tab. 3) were performed.

Tab. 1. The share evaluation of wood-processing FBs in the research sample.

<i>FB share in the research sample</i>	<i>Absolute frequency</i>	<i>Cumulative absolute frequency</i>	<i>Relative frequency (%)</i>	<i>Cumulative relative frequency (%)</i>
<i>Family businesses</i>	404	404	69.8	69.8
<i>Non-family businesses</i>	175	579	30.2	100
<i>Total</i>	579		100	

Tab. 2. Relative frequency test of wood-processing FBs in Slovakia.

<i>Researched area</i>	<i>Alternative hypothesis</i>	<i>p (%)</i>	<i>n</i>	<i>u</i>	<i>p-level</i>
<i>Share of wood-processing FBs in Slovakia</i>	$\pi > 50\%$	69.8	579	10.37	0.000

Tab. 3. Interval estimate of the share of wood-processing FBs in Slovakia.

<i>Researched area</i>	<i>p (%)</i>	<i>n</i>	<i>Lower estimate level (%)</i>	<i>Upper estimate level (%)</i>
<i>Share of wood-processing FBs in Slovakia</i>	69.8	579	66	74

The detailed analyzes according to the applied mathematical and statistical methods show that the share of FB in the WPI in Slovakia is the majority with a reliability of 95%. The above corresponds to the estimate of the share of FBs in all industries in Slovakia according to the Slovak Business Agency from 60% to 80% (SBA, 2020). The estimate of EUROPEAN FAMILY BUSINESS (2016) gives also up to 90%. These findings are the key concerning the introduction of the prerequisites for the development of the wood-processing family enterprises in Slovakia. Family businesses have many specifics and require an individual approach, as confirmed by the authors MORESOVÁ *et al.* (2021), MACHEK and HNILICA (2013), SZABÓ (2012), WRÓBLEWSKA-KAZAKIN (2012). The results presented in the next part refer to a selected group of wood-processing family enterprises in Slovakia.

Same way as the share of FBs in the WPI in Slovakia with a connection to the prerequisites of the development of the WPI, there is a substantial insight into the potential of this sector concerning the creation of GDP. The surveyed enterprises perceive their potential to become a backbone of the economy (Tab. 4) at the level of more than 50% of affirmative answers. For a correct evaluation, the relative frequency hypothesis test was applied, confirming the validity of the statement that wood-processing enterprises in Slovakia have the potential to become a backbone of the economy. According to the enterprises in association with the forestry sector, the potential is obvious, and the authors MELICHOVÁ *et al.* (2022) also confirm this based on their own study. The results of the Interval Estimate show their range at the level of 52% to 63%.

Tab. 4. Relative frequency test on the potential of the wood-processing FBs in Slovakia.

<i>Researched area</i>	<i>Alternative hypothesis</i>	<i>p (%)</i>	<i>n</i>	<i>u</i>	<i>p-level</i>
<i>Potential of the WP FBs in Slovakia as the backbone of the economy</i>	$\pi > 50\%$	57.18	404	2.57	0.005

The interviewed businesses further responded on the ecological aspect of the WPI in Slovakia as a prerequisite for development and sustainability. With regard to the enterprises from other sectors, wood-processing enterprises are considered to be more ecological (Tab. 5) and at the same time with a lower negative impact on the environment, which predisposes them to the very premise of the future backbone of the national economy of the Slovak Republic (QUAYE and MENSAH 2018). The current orientation is one-sided in favor of the automotive industry (TÖRÖK 2022). For the entire WPI, the Interval Estimate predicts a range of 55% to 65% of businesses that are considered more environmentally friendly.

Tab. 5. Relative frequency hypothesis test about the ecological perception of wood-processing enterprises.

<i>Hypothesis</i>	<i>Researched area</i>	<i>Alternative hypothesis</i>	<i>p (%)</i>	<i>n</i>	<i>u</i>	<i>p-level</i>
H1	The environmental friendliness of the WPI	$\pi > 50\%$	59.93	404	4.07	0.000

Based on the above, it can be concluded that the validity of *hypothesis H1 has been confirmed*. According to the result of the Relative frequency hypothesis test with the value of p-level (0.000), it was confirmed that wood-processing enterprises in Slovakia are mostly perceived as more environmentally friendly compared to companies from other industries.

Certification in the industry does not reach a level higher than 30%, neither according to the results of the Relative frequency hypothesis test nor the Interval Estimate. This was set in the range of 15% to 22% of certified wood-processing enterprises in Slovakia. Based on the sample average, the p-level reached 18.56%, which was a higher value than the critical limit α ($\alpha=0.05$) (Tab. 6). It follows from the above that most wood-processing enterprises in Slovakia are not certified and *hypothesis H2 was not confirmed*.

Tab. 6. Relative frequency hypothesis test about the certification level in the WPI.

<i>Hypothesis</i>	<i>Researched area</i>	<i>Alternative hypothesis</i>	<i>p (%)</i>	<i>n</i>	<i>u</i>	<i>p-level</i>
H2	Certification level in WPI	$\pi > 50\%$	18.56	404	16.25	1.000

In absolute terms, 75 of the 404 questioned wood-processing family businesses stated that they have a certificate related to ecology. Out of this number, up to 78.95% emphasize the certificates when communicating with the community. According to the results of the Interval Estimate, the range of such enterprises is from 70% to 88%. Due to the low frequency of the sample average, the interval is defined in the broader sense. At the same time, those wood-processing enterprises that hold the certificate were asked whether they had noticed a causal increase in the demand for their own products based on the certification (MARKO 2019). 56% of the questioned enterprises responded negatively. Through the Interval Estimate, it was possible to predict that the range of certified wood-processing enterprises in Slovakia, which did not experience an increase in demand for their own products thanks to the certificates, is from 45% to 67%.

In addition to the various determinants that wood-processing enterprises in Slovakia face (KOCIANOVÁ *et al.* 2022), whether from the internal or external environment, they challenge a central problem in the sense of underestimating the importance of strategic planning and management. According to the results of the survey (Tab. 7), Slovak wood-processing enterprises do not apply a strategy which would bring a competitive advantage besides other benefits (TAPERA 2014; YULIANSYAH *et al.* 2017). Applying the Interval Estimate, it is predicted that the total range of the companies in question is from 24% to

35%, which is insufficient. According to these findings, it can be concluded that *hypothesis H3 was not confirmed* (p-level=1.000). It is considered beneficial that from 50% to 71% of the enterprises that have implemented the strategy perceive its benefit in the form of competitive advantage. Considering the low number of companies with the strategy, the interval is broadly defined and there is a wider space for future research in the area.

Tab. 7. Relative frequency hypothesis test about strategy in the wood-processing enterprises.

<i>Hypothesis</i>	<i>Researched area</i>	<i>Alternative hypothesis</i>	<i>p (%)</i>	<i>n</i>	<i>u</i>	<i>p-level</i>
H3	Strategy in the wood-processing enterprises	$\pi > 50\%$	29.79	404	-8.88	1.000

Based on the results shown in Tab. 3, 66% to 74% of wood-processing enterprises in Slovakia are family-owned. They were questioned about the succession strategy in their businesses. The succession strategy will guarantee the successful future transfer of the business into the hands of the next generation and thus support the sustainability of wood-processing enterprises (PORFIRIO *et al.*, 2020). The finding (Tab. 8) that the majority of wood-processing family businesses in Slovakia do not have such a strategy is problematic. For the entire population of wood-processing FBs, the estimate is predicted at 76% to 85%.

Tab. 8. Relative frequency hypothesis test for succession strategy in the wood-processing enterprises.

<i>Researched area</i>	<i>Alternative hypothesis</i>	<i>p (%)</i>	<i>n</i>	<i>u</i>	<i>p-level</i>
Succession strategy in the wood-processing FBs	$\pi > 50\%$	80.85	404	15.75	0.000

The participants of the survey were wood-processing enterprises across all regions of Slovakia. According to the results of the survey, it was possible to identify the majority share of family businesses in this industry sector, as expected based on studies published by the SLOVAK BUSINESS AGENCY (2020) and EUROPEAN FAMILY BUSINESS (2016). It results that more attention should be paid to the issue of the family business and the specifics related to it as suggested by the authors MORESOVÁ *et al.* (2021), WANG *et al.* (2017) and BELANOVÁ (2014). Without adopting a specific definition of a family business, the permanent and sustainable development of family wood-processing businesses in Slovakia, of which there are a majority, cannot be ensured, which corresponds to the findings of the authors BEKERIS (2012) and PARADA and GIMENO (2016). The development of the WPI in Slovakia is closely linked to the development of the entire forestry and forest-based industry. The percentage shares for individual figures indicate that the segment of family businesses is economically significant and stable even in times of crisis (LAM and LEE 2012; SAN MARTIN-REYNA and DURAN-ENCALADA 2012; GONZÁLEZ and PEREZ-URIBE 2021). Over the last period, due to the coronavirus pandemic, many companies have gone bankrupt and GDP has fallen sharply in countries all over the world (JACKSON *et al.* 2021; KUBENKA and MYSKOVA 2019; MUSA *et al.* 2022). However, in hindsight, FBs appear to be more capable of responding flexibly to changes and restrictions brought about by crises and are also more resilient (AMORE *et al.* 2022). The pandemic brought undoubtedly a disruption to their harmony and forced FBs to create, reduce, search and change resources and capabilities to survive and become more sustainable (GONZÁLEZ and PEREZ-URIBE 2021; DONTU and GUSTAFSSON 2020; CHRISMAN and PATEL 2012; BREWTON *et al.* 2010). The family itself and its cohesion are a prerequisite for a source of competitive advantage. The interaction between the family and the business creates value (RAU *et al.* 2019; LI 2022). Among other things, a competitive advantage is also provided by the implementation of strategies in the company, as stated by

the authors TAPERA (2014) and ITTNER *et al.* (2003). Strategic planning and management offer benefits such as readiness or overall growth of business performance (CENAMOR 2021). Therefore, having a strategy is considered a certain prerequisite for the development of wood-processing enterprises in Slovakia, which was not confirmed in the results of the survey (hypothesis H3 rejected). The percentage of businesses with a strategy is estimated at 24% to 35%, which is insufficient all the more because its contribution in the form of competitive advantage is significant (declared by more than 50% of enterprises). Also, during crises, it is very important that all businesses thoroughly consider the creation and implementation of the proper strategy and pay sufficient attention to this process (ALI and ANWAR 2021; BREGE *et al.* 2021; VRABCOVÁ and URBANCOVÁ 2021). Considering the family nature of wood-processing enterprises in Slovakia, it is very important to ensure their continuity in the form of a succession process. As the authors CHANG and LIN (2011) state, succession planning is a milestone for FBs and only 30% of companies can successfully handle it. The majority of family wood-processing businesses in Slovakia do not have a succession strategy, as shown by the results of the survey (76% to 85%), which corresponds to the statements of the authors CARR and HMIELSKI (2015). The issue of succession has been underestimated and neglected for a long time, even though strategic thinking is a tool for survival and development (PORFÍRIO *et al.* 2020; CHANG and LIN 2011). Support for environmental protection has increased in recent years, and wide space and attention are devoted to it (DARDANONI and GUERRIERO 2021; VALE *et al.* 2021). In relation to the environmental direction, support for the use of renewable natural resources and sustainability, all this is considered to be another prerequisite for the development of family wood-processing businesses in Slovakia. According to the results of the survey, wood-processing enterprises have proven their ecological perception, which led to the confirmation of hypothesis H1. Wood-processing enterprises in Slovakia are considered more environmental-friendly, estimated at 55% to 65% of the entire population. An important factor in the development of the industry is also the change in the hitherto one-sided orientation of the SR industry (TÖRÖK 2022). Enterprises also demonstrated their potential to become a backbone of the national economy (52% to 63%), which corresponds to the findings of the authors (MELICHOVÁ *et al.* 2022; QUAYE and MENSAH 2018). Another aspect that needs to be considered in the development of the family wood-processing businesses in Slovakia is certification. The role of certification is mainly to support sustainable management, while it serves to satisfy the needs of customers and is one of the basic tools of marketing (AULD *et al.* 2008). According to the results of the survey, the level of certification does not exceed the limit of 30% of certified wood-processing enterprises in Slovakia, which led to the rejection of hypothesis H2. The estimate for the entire industry ranges from 15% to 22%. What is compromising is the finding that most of the certified businesses do pay importance to their presentation in communication in the form of growth in demand for their own products (MUSOVÁ *et al.* 2017), which was also the subject of the publication by the author MARKO (2019). In communication with the public, the majority emphasize their presentation. Despite this, the growing demand for ecological products is considered to be the backbone of the development of wood-processing enterprises in Slovakia, as stated by the authors BALLEW *et al.* (2019) and CANIËLS *et al.* (2021). A positive ecological perception of the enterprises compared to companies from other sectors of industry was demonstrated. For the area of growth in demand for products based on certification, there is space for more detailed research.

CONCLUSION

The elimination of barriers to strategic planning and management and the creation and implementation of complex strategies are considered to be a central prerequisite for developing family wood-processing businesses in Slovakia. In connection with the family business, the form of succession strategies is also essential, as shown by the results of the survey. It is considered crucial that wood-processing enterprises perceive their potential to become the backbone of the national economy. The evaluation of the validity of the assumed hypotheses showed that most wood-processing enterprises in Slovakia have yet to create nor implement a comprehensive strategy, which hinders the development of the sector as a whole. Orientation to enhance the environmental direction of the industry and sustainability in terms of the use of renewable natural raw materials is also necessary within the national policy. As for the certification area, its low rate in the researched industry was determined, which rejected the assumption about the majority of certified enterprises. Concerning this, a wider space is created for comprehensive research on the impact of certification on the growth in demand for products, as the number of certified enterprises limited the research. Since family businesses dominate the wood-processing industry in Slovakia, it is necessary to remove the barrier to the development of family businesses in Slovakia by introducing a uniform definition of a family business. It prevents obtaining accurate statistical characteristics about the segment of family businesses in the researched industry. Among other things, it was proven that family businesses show higher resilience and sustainability not only in times of crisis. By removing the barriers to the family business in Slovakia, significant progress will occur in the development of family wood-processing businesses and the WPI sector, as the share of family businesses, according to statistical estimates, ranges from 66% to 74%. The main limitation of the research is that the achieved results are presented in summary for all family businesses that operate in the WPI in Slovakia. The size of the family business and the length of its operation were not specifically taken into account. Similarly, it is necessary to examine whether the problems of family businesses differ from those of non-family businesses in the WPI in Slovakia. The stated limits also represent the potential and the need to address the issue in future research.

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ACKNOWLEDGEMENTS

The authors are grateful for the support of the Slovak Research and Development Agency [contracts no. APVV-18-0520, APVV-18-0378, APVV-20-0004, APVV-21-0051].

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