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Are Consumers Interested in Colored Beech Wood and Furniture Products?

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Abstract: The beech (*Fagus sylvatica* L.) is the most represented tree from the deciduous trees in Slovakia. This paper deals with the issue of color tones of steamed beech wood and furniture products made of it. The main objective of this paper was to identify the interest of Slovak consumers in colored beech wood and furniture made of it. An empirical survey was used to map the issue, while the basic set was the population of Slovakia. The representativeness of the sample set was verified through the chi-square test. The results showed that Slovak consumers are highly interested in buying beech wood and products made of it. In addition to the price and quality of the wood raw material, the color of the wood is also an important factor for them. The majority of respondents stated that they were not interested in buying wood and furniture products in the native color of beech wood. On the contrary, Slovaks especially prefer deep brown-red tones of beech wood. The results of the conducted survey are up to date and take into account consumers' behavior after the crisis caused by the COVID-19 pandemic as well as the current economic crisis. This information will help woodworking and furniture enterprises operating in the Slovak business environment to better adapt their offer of products for the end consumers. At the same time, it will help in working efficiently with wood raw material, which is becoming a short commodity from a global point of view.

Keywords: beech wood; colored wood; color tones of steamed beech; demand; furniture industry

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1. Introduction

Wood can be considered one of the oldest and most widespread natural materials. In its structure, wood is a natural composite consisting of three components: cellulose, hemicellulose and lignin [1]. It has a wide application in practice. It is considered a basic building material, which is traditionally used for buildings and other types of construction [2]. In addition to construction, as [1,3] agree, wood can be used in other areas (e.g., in the production of furniture, fuel, paper, etc.). Its wide range of use makes wood a universal and renewable material.

According to [4,5], the furniture industry is considered to be one of the oldest and most important woodworking industries in the world, which also closely impacts on global socioeconomic growth. The raw materials used in the furniture industry have a great influence on the productivity of the furniture industry itself. Due to the lack of wood raw material in most countries in this industry [6–8], it is inevitable to look for alternative solutions. As [5] present, a greater use of waste wood or a reduction in the weight of conventional wood-based panels (WBPs) used for furniture production has been implemented. Even as a result of the insufficient amount of wood raw material, some authors began to carry out surveys on the demand for the so-called plastic furniture [9].

In Slovakia, the situation on the availability of wood raw materials differs significantly from most countries. The main reason is the fact that the Slovak forest areas cover almost 42% of the total territory of the Slovak Republic. Forests in Slovakia are represented by both coniferous (41.7%) and deciduous trees (58.3%). While conifers are mainly used in the

construction industry, deciduous trees serve primarily for the furniture industry. In view of the above, Slovakia is considered fully independent in terms of wood production. Spruce (*Picea abies* L.) (26.8%) is the dominant coniferous wood and the deciduous trees are mostly represented by beech (*Fagus sylvatica* L.) in the share of 29.4% [10–12].

Research, as stated by the authors of [5,13], has shown that the customer demand for wood products is primarily influenced by two factors: design and price. These results clearly show the need to produce furniture in different price categories; however, there is also the necessity to focus on their design. Color is the basic factor that affects the aesthetic appearance of wood products [14,15]. Ref. [12] also considers color to be the most important material characteristic. Customer requirements are constantly changing. The most common reason is fashion trends that force manufacturers to adjust the color of wooden products. Flexible adaptation to the market is a means that directly affects, and therefore increases, the competitiveness of individual manufacturers. The supply of domestic manufacturers should correspond to the demand, also concerning the current situation, when wood raw material is becoming globally a commodity in short supply, and thus improper handling would demonstrate the principles of sustainability.

In general, it is possible to control different color tones of beech wood by variations in processes that use temperature as a modifying agent [14]. As [11,16,17] claim, the color of beech and oak wood is modified primarily by steaming in Slovakia. Wood steaming, as stated by [11,16], is a process in which wood is placed in an environment of hot water, saturated water vapor or saturated moist air where it warms up and changes its own properties (physical, mechanical or chemical properties). The heat in the wet wood initiates reactions, such as the splitting of free radicals and phenolic hydroxyl groups in lignin, the extraction of water-soluble substances, and the degradation of polysaccharides, which leads to the formation of new chromophore groups that cause the change of the wood color. The following Figure 1 shows the native color of beech wood before steaming.

Figure 1. Native color of beech wood. Note: Reproduces from Dzurenda, L. Colouring of beech wood during thermal treatment using saturated water steams; published by Acta Fac. Xylologiae Zvolen, 2014, with permission from Acta Fac. Xylologiae Zvolen, 2022.

The authors [12,18,19] agree that information on consumer preferences in the field of the surface treatment of wood products made of beech wood is insufficient in Slovakia. This absence means that the procedures for the distribution of wood raw material and its processing itself are rarely adjusted according to consumer preferences. According to [18,19], knowing the demand for products is a basic prerequisite to achieving sales and ensuring the required level of profitability. If a company needs to sell products that consumers are not interested in, it must offer considerable price discounts. This gradually leads to a minimum margin, even to selling at a loss. Knowing the demand helps companies to optimally set the offer, which is a prerequisite for ensuring competitiveness and good financial health.

Considering the high potential of Slovakia in the logging and processing of beech wood, it is necessary to carry out a survey that will supplement the missing information on consumer preferences for products made of this wood, also from an aesthetic point of view. Trends in surface treatment and especially colors are constantly changing. Fashion trends mainly change this. It is essential that enterprises operating in the furniture industry in Slovakia know what customers want and thus can adapt their supply flexibly to the needs of consumers. It is necessary to follow it with regard to sustainability so that there

is no waste of wood raw material, which is becoming a globally short commodity. At the same time, it is an opportunity for Slovak furniture enterprises to improve their economic results, which were significantly affected by the COVID-19 pandemic and the ongoing war in Ukraine and the associated embargoes.

The present research adds to the literature by connecting the issue of steaming beech wood, which results in different wood colors, with potential consumers' preferences for colored beech wood and furniture products. The article emphasizes the need to perceive the given issue comprehensively, because companies dealing with the color treatment of beech wood should know the preferences of customers in order to produce what the market demands. This issue has not been paid more significant attention in previous research. The main objective of the paper is to identify the attitude of Slovak consumers for the color tones of beech wood and furniture made of it. The authors analyzed customers' preferences for various beech wood colors. According to the abovementioned assessment, for the business success, a diversified offer for various market segments should be prepared and flexible reactions on changing preferences of demand shall be performed. The specification and structure of the most demanded beech wood colors are the findings of the research.

The results of the research can serve as a basis for companies operating in the wood-processing industry. It is important for the success of wood-processing enterprises that they take into account, first and foremost, the diverse and specific requirements, both of loyal and regular customers, but especially of potential customers.

2. Materials and Methods

According to [11], the steaming process is used to change the color of beech wood. Wet beech wood blocks made from sapwood, or mature wood without the presence of a false core with dimensions of 40 × 100 × 800 mm and a moisture content of wp = 63.8 ± 3.5%, were thermally treated with saturated steam at temperatures t = 105 °C, t = 125 °C and t = 135 °C for a period of τ = 9 h to acquire a pale pink-brown, red-brown and intense brown-red color in a pressure autoclave: APDZ 240 in the company Sundermann s.r.o. Banská Štiavnica. The steaming mode of beech wood is shown in the following Figure 2. The temperature values t_{max} and t_{min} are the temperatures for controlling the supply of saturated water steam to the pressure autoclave for the implementation of the technological process. Temperature t_4 is a parameter of the pressure of saturated water steam in the autoclave to which the pressure in the autoclave must be reduced before the pressure device can be safely opened.

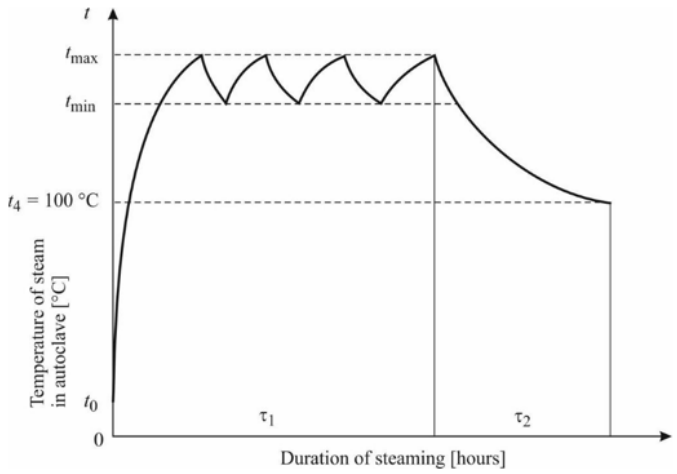

Figure 2. Mode of color modification of beech wood by steaming with a saturated mixture of steam and air or saturated water steam. Note: Reproduces from Dzurenda, L. Colouring of beech wood during thermal treatment using saturated water steams; published by Acta Fac. Xylologiae Zvolen, 2014, with permission from Acta Fac. Xylologiae Zvolen, 2022.

The result of the steaming process was a change in the color of the beech wood to three different tones, which is presented in the following Figure 3.

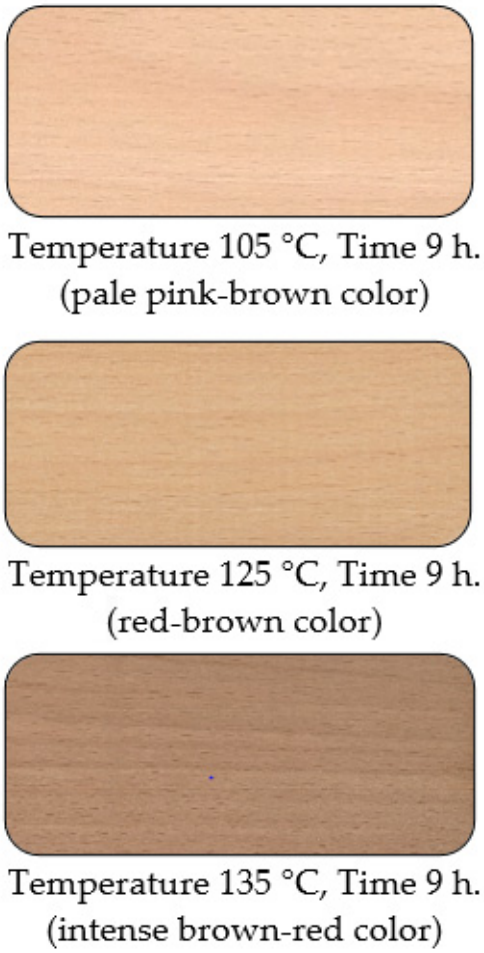

Figure 3. Color change of beech wood after steaming. Note: Reproduces from Dzurenda, L. Colouring of beech wood during thermal treatment using saturated water steams; published by Acta Fac. Xylologiae Zvolen, 2014, with permission from Acta Fac. Xylologiae Zvolen, 2022.

The necessary data to identify the preferences of Slovak consumers in the area of beech wood color tones and furniture made of it were obtained through a questionnaire survey in Slovakia. The survey was conducted in the period from February to May 2022. The questionnaire consisted of two basic parts:

1. part—9 questions: Basic characteristics of the consumer
2. part—10 questions: Demand for beech wood color tones and products made of it

The first part of the questionnaire contained questions to determine the profile of the consumer (i.e., gender, age, education, marital status, job position or income). The second part of the questionnaire was directly focused on the issue of determining the main factors that influence the purchase of wood products (price, quality, wood species used, wood color tones, specific types of furniture, ecological factors, etc.). In the questionnaire, the respondents were asked to indicate a preferred color design of beech wood. The options were accompanied by the pictures shown in Figures 1 and 3.

In order to carry out the survey and ensure its representativeness, it was necessary to identify a basic set. The size of the basic set was determined according to the population of Slovakia, i.e., at the level of 5,441,993, which is recorded and regularly updated by [20]. The questionnaire was then sent to the sample, which was selected by a random drawing through a pseudo-random number generator. The issue has been mapped in Slovakia using the empirical survey in the form of an online questionnaire. The research sample consisted

of 10,500 inhabitants of the Slovak Republic. The return rate of the questionnaire was at the level of 9.9%, i.e., 1039 responses.

The representativeness of the sample was verified by using the nonparametric chi-square test in the IBM SPSS (Statistics Package for the Social Sciences, version 26.0, joint stock company, New York, NY, USA) statistical program. The regional distribution of respondents according to individual self-governing regions of Slovakia was used as a verification criterion. The chi-square test of independence is one of the most useful statistics for testing hypotheses when the variables are nominal, as often happens in clinical research. Unlike most statistics, the chi-square (χ^2) can provide information not only on the significance of any observed differences, but also provides detailed information as to precisely which categories account for any differences found [21].

Data on the regional distribution of respondents (according to permanent residence) were obtained through the Statistical Office of the Slovak Republic [20]. The following Table 1 presents the size of the Slovak population according to their permanent residence in individual regions—as distribution of the basic and sample set.

Table 1. The population of the sample and basic sets.

Slovak Regions	Sample Set		Basic Set	
	Abs.	%	Abs.	%
Bratislava region	137	13.19%	721,626	13.26%
Trnava region	108	10.39%	565,652	10.39%
Trenčín region	110	10.59%	575,582	10.58%
Nitra region	129	12.42%	675,724	12.42%
Žilina region	132	12.70%	690,569	12.69%
Banská Bystrica region	119	11.45%	623,294	11.45%
Prešov region	155	14.92%	808,294	14.85%
Košice region	149	14.34%	781,252	14.36%
TOTAL	1039	100.00%	5,441,993	100.00%

The following Table 2 presents the results of the nonparametric chi-square test, which was used to verify the representativeness of the sample set according to the chosen criterion. The results show that the p-value is at the level of 1000, with the chosen level of significance $\alpha = 0.05$. Since the p-value is higher than α, the sample set is representative according to the regional distribution of the population of Slovakia in individual self-governing regions.

Table 2. Results of the nonparametric chi-square test.

Slovak Regions	Observed N	Expected N	Residual
Bratislava region	137	137.15	−0.2
Trnava region	108	108.06	−0.1
Trenčín region	110	110.13	−0.1
Nitra region	129	128.84	0.2
Žilina region	132	131.95	0.1
Banská Bystrica region	119	119.49	−0.5
Prešov region	155	154.81	0.2
Košice region	149	148.58	0.4
Chi-Square	0.003998		
df	7		
p-level	1.0000		

Methodologically, the study is divided into several logical parts. In the first step, it was necessary to use the scientific methods of analysis, synthesis and description to process literary reviews from domestic and foreign authors. Subsequently, a questionnaire was drawn up so that the researched issue could be mapped in practice. The objective was to identify consumer preferences in terms of the beech wood color tones and the products made of it. An electronic questionnaire was distributed among inhabitants of Slovakia

with the registered permanent seat. The obtained results were evaluated descriptively together with the hypotheses using selected mathematical and statistical methods. MS Excel and IBM SPSS software support were applied. Hypotheses were formulated based on a detailed analysis of knowledge from secondary sources, which are listed in the theoretical background of the paper:

Hypothesis H1: *It is assumed that the majority of Slovak consumers are interested in wood and furniture products made of beech wood.*

Hypothesis H2: *It is assumed that the majority of Slovak consumers are not interested in wood and furniture products that are made of native beech wood.*

Hypothesis H3: *It is assumed that the majority of Slovak consumers are primarily interested in buying beech wood and products made of it in dark color tones.*

Hypothesis H1 was verified through an interval estimation. The authors used the relationship for the calculation of the 95% confidence interval for relative frequency [22].

Hypotheses H2 and H3 were tested through a binomial test that tests the null hypothesis in accordance with the population share. The test replies to the question whether it is possible to claim, based on the sample, that the share in the basic set is equal to a certain number, or another share in the set (or is bigger or smaller than the given number/another calculated share) [22].

All hypotheses were tested at a significance level of 5% ($\alpha = 0.05$). In view of the achieved results of the survey, specific current information on the preferences of Slovak consumers in the area of demand for color tones of beech wood and products made of it are presented at the end of this paper. The results will help all woodworking and furniture enterprises better adapt products for the domestic market and eliminate the waste of wood raw materials for products that Slovak consumers do not show such high interest in. This part was processed using the scientific methods of summarization, analysis, comparison, synthesis and deduction.

3. Results

This part presents the results obtained from the primary survey dedicated to the issue of interest in the color tones of beech wood in Slovakia.

A total of 1039 respondents took part in the survey. Women had the majority representation of 52.9% and 47.1% of the respondents were men. 55.8% of Slovak inhabitants have their permanent residence in the town and 44.2% of the respondents live in the village. According to the achieved results, up to 51.1% of respondents live in an apartment, 48.1% in family houses and 0.8% of respondents live in another type of housing (studio). Other characteristic features of the respondents are summarized in the following Table 3.

In the second part of the survey, attention was paid directly to the preferences of consumers in the researched field.

As the achieved results show, up to 86.7% of respondents care about the type of wood of the wood and furniture products they buy. On the contrary, 12.5% of respondents are not interested in the type of wood and 0.8% could not clearly express themselves.

In the following question, the respondents were asked to mark three main factors that are decisive for them when buying a specific product made of wood. The detailed results are presented in the following Figure 4. Three factors are dominant, namely, the quality, price and design (color tone) of wood products.

Table 3. Characteristic features of the respondents.

Questions	Answers				
Age of the respondent	0–25 years old	26–35 years old	36–45 years old	46–55 years old	56 and more years old
	10.8%	*26%*	*31.8%*	*19.5%*	*11.9%*
Marital status	single	married	partnership	divorced	
	27.8%	*35.1%*	*19.7%*	*17.4%*	
Number of children	1 child	2 children	3 and more	Without children	
	37.2%	*32.4%*	*14.1%*	*8.9%*	
Education	Basic education	Secondary education without GCSE	Secondary education with GCSE	University degree	
	1.3%	*15.7%*	*38.4%*	*44.6%*	
Monthly income	up to 500 €	501–800 €	801–1100 €	1101 € and more	
	19.4%	*14.1%*	*54.6%*	*11.9%*	

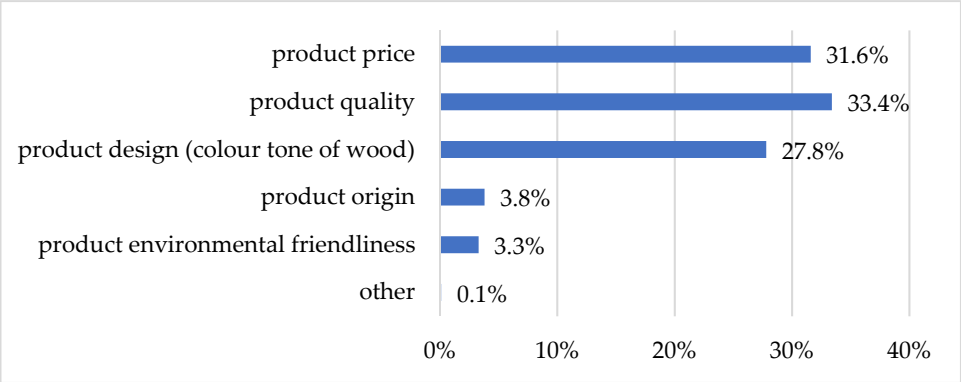

Figure 4. Key criteria of consumers when buying wood products.

The results of the survey show that Slovak consumers prefer buying wooden products made of domestic tree species (82.4%). Tropical woods are preferred by only 17.6% of respondents. At the same time, up to 68.4% of respondents would rather buy furniture made of solid wood than furniture covered with wood veneers (stated by 18.3%) or furniture made of chipboard and fiberboard (13.3%).

The presented results clearly confirm that Slovak consumers are mainly interested in wooden products made of domestic tree species. Furthermore, it was necessary to identify whether they also prefer products made of beech wood. Of the total number of respondents who actively participated in the survey, up to 71.5% buy mainly products made of beech wood. Of the respondents, 24.5% prefer other woods and 2% could not express themselves clearly. This question also served to verify Hypothesis H1, where it was assumed that the majority of Slovak consumers are interested in wood and furniture products that are made of beech wood. The validity of Hypothesis H1 was verified using an interval estimate, the results of which are presented in detail in the following Table 4. The results of the interval estimate at a reliability of 95% showed that 68.76% to 74.24% of Slovak consumers prefer mainly buying wood products that are made of beech wood. Hypothesis H1 was confirmed.

Table 4. Interval estimate for Hypothesis H1.

Research Field	*p*	*n*	95% Interval Estimate	
			Lower Limit	Upper Limit
Interest of Slovak consumers in products made of beech wood	71.5%	1039	68.76%	74.24%

As can be seen from Figure 5, consumers most often buy seating furniture (48.7%), dining furniture (46.9%) and cabinets (42.5%) made of beech wood. The detailed results are summarized in the following figure. In this question, the respondents could mark all the options of preferred types of beech wood products.

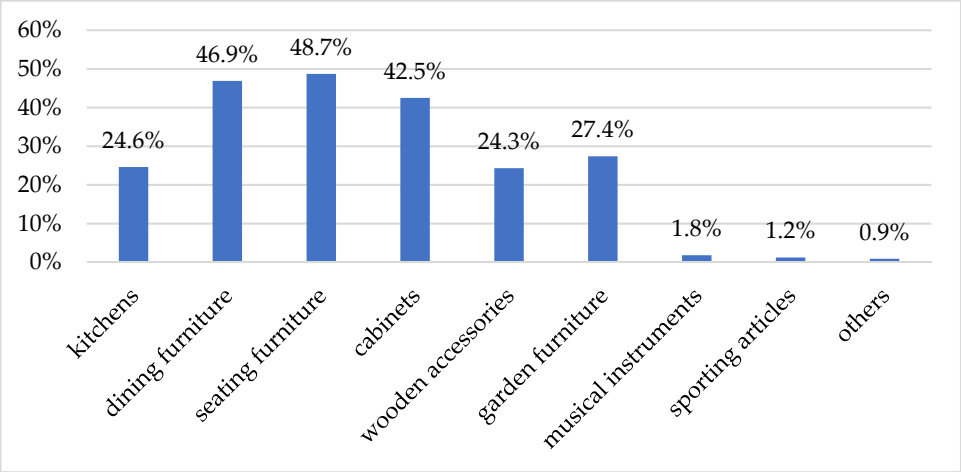

Figure 5. Preferred types of beech wood products by consumers.

Another question was used to verify the validity of Hypothesis H2, where it was assumed that the majority of Slovak consumers are not interested in wood and furniture products made of native beech wood. The results clearly show that up to 82.8% prefer a modified color tone of beech wood, and only 17.2% of respondents prefer the native (natural) beech wood tone. As the results of the binomial test shown in Table 5 confirm, the *p*-level (0.000) is less than the chosen level of significance ($\alpha = 0.05$), i.e., the assumption in Hypothesis H2 was confirmed.

Table 5. Binomial test results for Hypothesis H2.

Binomial Test				
	N	**Observed Prop.**	**Test Prop.**	***p*-Level**
natural (native) color of beech wood	179	0.1720	0.5	0.000
modified color of beech wood	860	0.8280		
Total	1039	1.0000		

The vast majority of respondents (74.8%) prefer beech wood without gloss. Beech wood with gloss would be preferred by 25.2% of respondents.

In the penultimate question, the respondents were asked to indicate a preferred color design of beech wood. The options were accompanied by the pictures shown in Figures 1 and 3. The results showed that most respondents would choose the intense brown-red color of beech wood (64.6%). The second most frequently indicated option was red-brown color (20.9%), followed by pale pink-brown color (12.1%) and natural beech wood color (2.4%). The last hypothesis, H3, was also related to this question, where the assumption was made that the majority of Slovak consumers are primarily interested in buying beech wood and products made of it in dark color tones. The validity of the hypothesis was verified by the binomial test (Table 6). The achieved results (p-level = 0.000 < α = 0.05) confirm the validity of Hypothesis H3.

Table 6. Binomial test results for Hypothesis H3.

Binomial Test				
	N	**Observed Prop.**	**Test Prop.**	***p*-Level**
Native color	25	0.024	0.6	0.000
Pale pink-brown color	126	0.121		
Red-brown color	217	0.209		
Intense brown-red	671	0.646		
Total	1039	1.0000		

The last question of the conducted survey concerned the main reason why the respondents prefer the given color tone of beech wood. Most often, the respondents indicated the option of fashion trends, which was stated by a total of 52.1% of the respondents (Figure 6). The next most frequently mentioned option was personal preference, as indicated by 28.4% of the respondents. The following figure presents the detailed results.

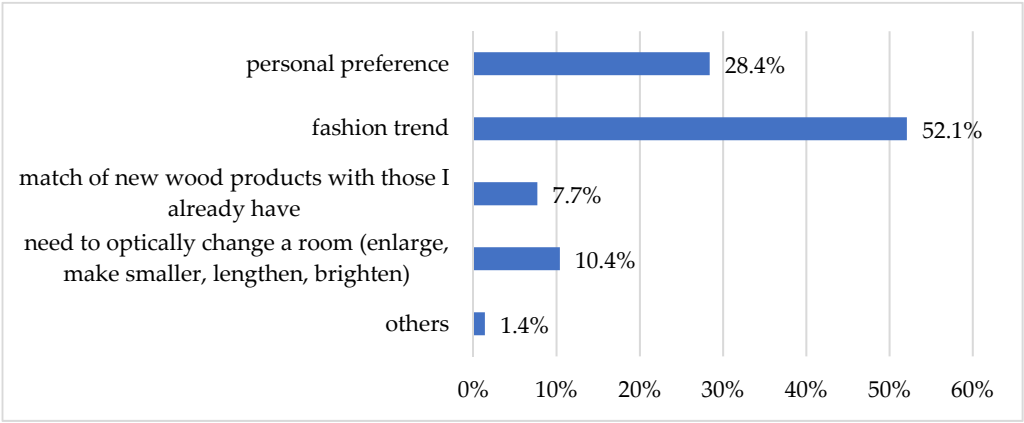

Figure 6. Consumer preferences for wood products made of beech wood.

4. Discussion

The following conclusions were formulated after summarizing the conducted survey: Slovaks who have their permanent residence mostly in the town (55.8%) participated in the survey. The highest representation was achieved by the age group 36–45 years (31.8%) and 26–35 years (26%). The respondents most often stated that they were married (35.1%) or single (27.8%). They take care of one (37.2%) or two children (32.4%). Basic social factors are also largely related to salary. Most respondents, specifically 54.6%, earn between €801 and €1100 per month. However, the second largest group by income was made up of respondents whose monthly income is up to 500 euros (19.4%). As the authors [23,24] agree, it is necessary to pay attention to the social inequalities that exist in society and directly affect the quality of the population when examining consumer preferences. As [25] emphasizes, incomes of the population, and the number of members in the households directly impact their investments that influence the quality of their living.

According to the surveys conducted by [26–30], for long-term investments, consumers are willing to pay extra for quality in order to extend the lifetime of the products. This trend was also confirmed in this survey, as up to 86.7% of respondents are interested in what kind of wood the products are made of when buying them. At the same time, when evaluating factors, the priority for them is the quality of the products, followed by the price, and the design itself (color tone of the wood). This issue is also related to the fact that Slovak consumers prefer wood products made of domestic trees (82.4%). Considering the high forest cover in Slovakia, as reported by [30–32], the woodworking and furniture industries have a long history in this region. Typical domestic coniferous trees include spruce, fir and pine. Beech, oak and maple dominate in terms of deciduous trees. At the same time, it points to the high potential for further development of this industry not only on the

domestic market but also abroad. The authors [33–35] point to the fact that individual wood species have different applications, especially concerning location (interior vs. exterior). Individual wood species differ in their basic properties, such as density, strength, elasticity, resistance, hardness, etc. At the same time, these properties significantly affect the quality of the final products.

The assumption of Hypothesis H1 has been confirmed, that the majority of Slovak consumers are interested in wood and furniture products that are made of beech wood. Respondents use these products most often in the interior—seating furniture (48.7%), dining furniture (46.9%) and cabinets (42.5%). [11,16] agree that the basic advantage of beech wood, in addition to the fact that it is a key wood raw material in Slovakia and therefore domestic wood, is that it has a wide application through the woodworking, furniture, construction and food industries. Beech wood does not contain resin, is flexible—ideal for bending—and has good density, hardness and strength. Another advantage is its affordability, but also the fact that it has an excellent ability to absorb impregnation coatings and its surface can be easily treated. These facts make beech wood an attractive raw material for potential customers. This is mainly due to the fact that the majority of Slovak consumers, which has been confirmed in Hypothesis H2, are not interested in wood and furniture products made of native beech wood (without its color treatment). Likewise, the majority of respondents prefer matt tones of beech wood (74.8%). The last hypothesis, H3, emphasized the necessity to modify beech wood and products made of it into dark tones, as this tone is currently demanded by the majority of Slovak consumers. Change of color or color tone of beech wood by steaming is, according to [17], applied mainly for beech (lumber or veneer cuts). [11] also emphasizes that the process of steaming can change the color tone of the raw material without the use of chemical substances or unify its color. On the one hand, the processor saves on demanding surface treatment and does not have to use chemical substances, for example during staining, and on the other hand, the ecological factor is underlined, which addresses customers more and more. The group of authors [36–39] draw attention to environmental awareness, which brings about a change in thinking and the need to protect the environment for future generations. A customer oriented in this way is also interested in the ecological certificates of individual products. It follows from the above that it is inevitable to modify the color tones of beech wood through thermal treatment, which will be friendly to the environment, e.g., by looking for other ways to reduce the energy intensity of the process. On the contrary, in their publications, [12,29,30] pointed out the volatility of consumer decisions and their subjection to fashion trends, which is in direct contradiction to sustainability. In this survey, Slovak consumers mainly chose dark tones of beech wood, most often the intense brown-red color (64.6% of respondents). Respondents justified the choice of color tones mainly by fashion trends (52.1%) and personal preference (28.4%). Authors [29,30,40–42] point to psychological factors that lead consumers to prefer dark tones of wood products. In addition to fashion trends, a dark color can remind consumers of the color of wood bark, which connects them more with nature and emphasizes the ecological aspect. Last but not least, as stated by [12,43], consumers prefer dark tones of wood and furniture products because they evoke the feeling of more expensive products made of exotic woods, which are unaffordable for most potential customers.

5. Conclusions

The main goal of this paper was to identify the attitude of Slovak consumers for the color tones of beech wood and furniture made of it.

The results confirmed that Slovak consumers care about the kind of wood when buying wood and furniture products. This was stated by 86.7% of respondents. The most important criteria that Slovaks consider when buying wood products include quality, price and design (wood color). Up to 82.4% of respondents prefer to buy wooden products and furniture made of domestic trees. The typical domestic wood species are mainly oak, beech and spruce. At the same time, respondents give preference to buying products made of

solid wood (68.4%). According to the results, up to 71.5% of customers favor products made of beech wood. These results confirmed the assumption in Hypothesis H1, which was confirmed by interval estimate, i.e., most Slovak consumers are interested in wood and furniture products that are made of beech wood. Most often, consumers buy seating furniture (48.7%), dining furniture (46.9%) and cabinets (42.5%) made of beech wood. Hypothesis H2 was verified with the binomial test, which assumed that the majority of Slovak consumers are not interested in wood and furniture products made of native beech wood. The achieved results confirmed the validity of Hypothesis H2, as up to 82.8% of respondents require the modification of color of beech wood. At the same time, up to 74.8% of respondents prefer beech wood without gloss. Slovak consumers especially like to buy products made of beech wood in the color modified to darker tones. The intense brown-red color of beech wood is preferred by up to 64.6% of respondents, and 20.9% of respondents give preference to the red-brown color of beech. The presented facts confirmed Hypothesis H3, which assumed that the majority of Slovak consumers are primarily interested in buying beech wood and products made of it in dark color tones.

It results from the above that Slovak consumers are interested in buying wood and furniture products made of beech wood in a modified color tone. This issue also draws attention to the fact that enterprises operating in this industry put a great importance on the steaming of beech wood to modify the color tone, i.e., thermal treatment of beech wood with saturated steam to change the color of beech wood to a deep brown-red.

The market with wood and furniture products can function long term only on the basis of balanced supply and demand for these products. However, trends are constantly changing and enterprises need to respond immediately and flexibly to these changes. The competitiveness of Slovak woodworking and furniture enterprises also depends on technological equipment, on the abilities and skills of employees, but also on corporate policy. It is essential to constantly monitor the customer preferences.

It is necessary to extend the further research to individual age groups of the population, type of dwelling (house, apartment), monthly income and number of members that make up one household. Due to the rapid changes in the current economic crisis and high inflation, changes in customer preferences may occur more quickly.

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