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FINAL QUALIFYING PAPER (PROJECT)

on the topic:

**“COMPETITIVE ADVANTAGES OF THE ENTERPRISE ON THE WORLD
MARKET OF WOODWORKING PRODUCTS”**

(based on data of PE “Euro Wood”, Birky, Chernihiv region)

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INTRODUCTION

Ukrainian enterprises entering the foreign market require existence of some competitive advantages of the enterprise. Improving the competitiveness of domestic enterprises leads to an increase in the export potential of the country, which in turn, allows to ensure its sustainable development.

Increased competition in most sectors of Ukraine's economy, accelerated political and social changes stipulate the necessity of stable market positions of the enterprises. In these conditions, the companies need to carry out market research, analysis of the state and activity of the company and on this basis, make strategic decisions on the implementation of new measures aimed at ensuring strong competitive positions. The issue of international competitiveness and competitive advantages is very relevant for those enterprises whose sphere of commercial and industrial activity extends to foreign countries. At the same time, the competitiveness of products and services depends on external economic activity of the enterprise, whose role as an external factor of economic growth in the current conditions is constantly increasing.

The woodworking industry of Ukraine, which is based on forestry, logging, woodworking and other enterprises of forest resources - is an important component of the state's economy. Based on the conditions of functioning of the woodworking industry, new methodological approaches to the formation of competitiveness and its assessment is needed, which will be able to bring this type of economic activity to a higher level and contribute to the complex development of the industry.

The topic of competitive advantage has been explored by many scientists for many decades. Among them are T. Kharchenko, V. Shkardun, G. Chupyk, T. Melnyk, A. Voichak, R. Kamyshnikov and others. Each of them had their own personal opinion about defining the essence of the competition itself, its interconnection with other economic categories, its influence on the activity of the enterprise, and, finally, the concept of "competitive advantage". They have significantly expanded the vision of competitive advantage, but some aspects of it received less attention, which confirms the need in researching competitive advantages in the final qualifying paper.

The purpose of the final qualifying paper is to study the system of managing the competitive advantages of the enterprise on the world market of woodworking products and to propose ways of increasing competitiveness of PE «Euro Wood» in the world woodworking market.

Tasks of the final qualifying paper are the following:

1. To analyze the world market of the woodworking products.
2. To conduct analysis of financial and economic activity of PE "Euro Wood".
3. To provide diagnostics of the internal and external environment of PE "Euro Wood".
4. To evaluate PE "Euro Wood" competitive advantages on the market of the woodworking products.
5. To develop a complex of measures for increasing the competitiveness of PE "Euro Wood".
6. To provide forecast evaluation of proposed measures for PE "Euro Wood".

The object of the final qualifying paper is the process of identifying the competitive advantages of the company's products on the woodworking market.

The subject of the research is theoretical and practical aspects of identifying the competitive advantages of the enterprise's products on the woodworking market.

The research is based on the methods of analysis and synthesis, statistical observation, absolute and relative variables, methods of comparison, abstraction, analogy, calculation. In accordance with the tasks set in the final qualifying paper, methods of research of processes are also used in the evaluation of the international and financial and economic activity of the enterprise.

Information base for research consists of official materials of the official international and Ukrainian websites, Internet resources, monographs and scientific-analytical articles of domestic and foreign scientists.

The structure of the final qualifying paper consists of the introduction, three parts, conclusions, references and appendices.

Approbation and utilization of research results are in the article «Modern trends for development of the wood industry enterprises in Ukraine», collection of scientific articles for specialization «international economics», part 2, KNUTE, Kyiv, 2019.

PART 1. RESEARCH OF THE MODERN STATE OF PE “EURO WOOD” DEVELOPMENT

1.1. Analysis of the world market of the woodworking products

The woodworking industry is one of the most important sectors in the economies of the different countries. Major industries and smaller enterprises based on forest products are the source of considerable income and employment. Exports of primary and, increasingly, value-added forest products generate significant foreign exchange for some countries [37].

The wood industry employs globally 13.7 million of formal workers, equivalent to 0.4% of the total labor force. Ten countries concentrate more than 60% of the total employment. Out of these, China, with 3.5 million formal jobs in the sector, accounts for 26% of the world employment. The top 10 countries by forest sector employment are: China, USA, Brazil, Russia, India, Japan, Germany, Indonesia, Italy, and Malaysia.

By the level of employment, different tendencies have been registered worldwide during the last years. With few exceptions the number of workers in the sector declined in Europe and North America, and increased in Latin America and Asia.

Decline has taken place due to rise in the productivity and substitution of labor for machinery. Increase of productivity has been driven by various factors, including abundance of cheap skilled labor, relatively abundant forest resources, high rate of economic growth, specific policies to encourage development and investment in the sector and a general improvement of the investment climate [18].

Production of the forestry goods after 2014 end till 2018 years increased in value and year to year it is going stable. The greatest changes related to the wood-based panels, recovered paper, paper and paperboard sectors, which started to play a great role in the world economy. Due to the data (Table 1.1), the most profitable markets - roundwood, sawnwood, wood-based panels, recovered paper, paper and paperboard. The increasing of the production volume is caused by the high demand on those products.

Table 1.1

Global production of the wood products in 2014-2018 years

Product	Unit	2014	2015	2016	2017	2018	Change (%)			
							2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017
Roundwood	million m ³	3706	3725	3746	3770	3797	0.51	0.56	0.64	0.72
Wood fuel	million m ³	1849	1858	1867	1878	1890	0.49	0.48	0.59	0.64
Industrial roundwood	million m ³	1857	1867	1879	1892	1907	0.54	0.64	0.69	0.79
Wood pellets	million tonnes	23	26	29	31	33	13.04	11.54	6.90	6.45
Sawnwood	million m ³	445	453	462	472	485	1.80	1.99	2.16	2.75
Wood-based panels	million m ³	302	322	346	372	402	6.62	7.45	7.51	8.06
Plywood	million m ³	112	121	132	144	157	8.04	9.09	9.09	9.03
Particleboard, OSB and fibreboard	million m ³	190	201	214	228	245	5.79	6.47	6.54	7.46
Wood pulp	million tonnes	124	136	150	166	184	9.68	10.29	10.67	10.84
Other fibre pulp	million tonnes	8	9	9	11	12	12.50	0.00	22.22	9.09
Recovered paper	million tonnes	192	202	212	223	235	5.21	4.95	5.19	5.38
Paper and paperboard	million tonnes	362	372	384	398	413	2.76	3.23	3.65	3.77

Source: conducted by the author based on [15]

Industrial roundwood includes all industrial wood in the rough (sawlogs and veneer logs, pulpwood and other industrial roundwood), chips, particles and wood residues. As a consequence of moderate growth in population and rapid growth in the economy, consumption of industrial roundwood in the Asia-Pacific region has shown sustained increase [19]. Due to the FAO statistics, China imported 43% of the total roundwood in 2018, during the previous years (2014-2017) China was the leader in import as well. Such countries, as Germany, Austria, Sweden and Canada during 2014-2018 imported approximately 5-7% of the industrial roundwood (Figure 1.1.). Russia and New Zealand exported the most of the industrial roundwood during 2014-2018, approximately 13-16%. Such countries as USA, Canada and Czech Republic are the important exporters as well (Figure 1.2.).

Sawnwood is a wood, that obtained either by sawing lengthways, or by a profile-grinding process and is greater than 6 millimeters (mm) in thickness [10]. China remains the main importer during the last years with a share of 22-26% of the total import. The second place in import takes USA (Figure 1.1.). Canada is considered to be

one of the largest exporters, in 2018 the share in export was 21%. With 42 percent of the land acreage of Canada covered by forests, the country contains 10 percent of the world's forested land, made up mostly of spruce, poplar and pine [17] (Figure 1.2.).

Paper and paperboard are made from cellulose fibres, extracted from trees, combined together with additives to make a continuous matted web [25]. Germany and USA are the main exporters and importers. The share of Germany in export was 8-12% during 2014-2018 years, in import – 7-10%. The share of the USA in export was 8-10% during 2014-2018 years and in import – 6-8% Among the other weighty importers are China, UK, Italy and exporters – Sweden, Finland, China (Figure 1.1.), (Figure 1.2.).

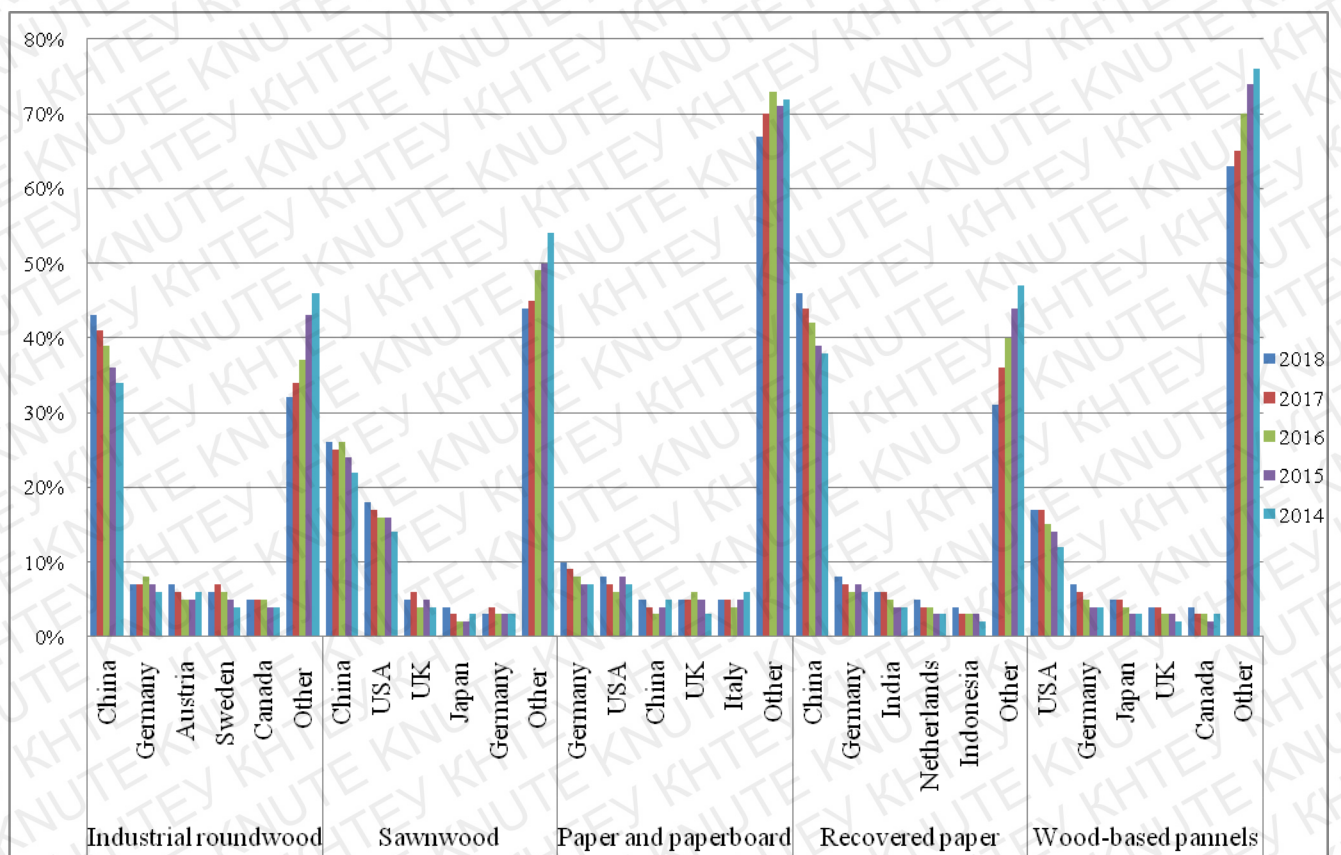


Figure 1.1. The main importers of the wood products in 2014-2018, % in the world import

Source: conducted by the author based on [15]

Recovered paper is recycled one when waste paper is turned into new. China is a dominant player on the global market of recovered paper, it imports millions of tons of recovered paper (RCP) each year for the production of paper and packaging products vital to its economy [9]. The share of import increased from 38% to 46% during 2014-2018 years. Among the other importers are Germany, India, Netherlands and Indonesia

(Figure 1.1.). The USA is the main exporter of the recovered paper which increased its share from 28% to 32% during 2014-2018. Among the other exporters are UK, Japan, France and Germany (Figure 1.2.).

Wood-based panels is a general term for a variety of different board products, which have an impressive range of engineering properties [44]. The main exporter in the world - China (13-16% of the total export during 2014-2018 years). Such countries, as Canada, Germany, Thailand and Russia have the leading position in export as well (Figure 1.2.). The United States consumes a large number of wood-based panel products: softwood plywood, decorative hardwood plywood and veneer, particle board and medium-density fibreboard, waferboard, and other structural composite boards, hardboard, and insulation board [43]. Such countries, as Germany, Japan, UK and Canada have the leading position import as well (Figure 1.1.).

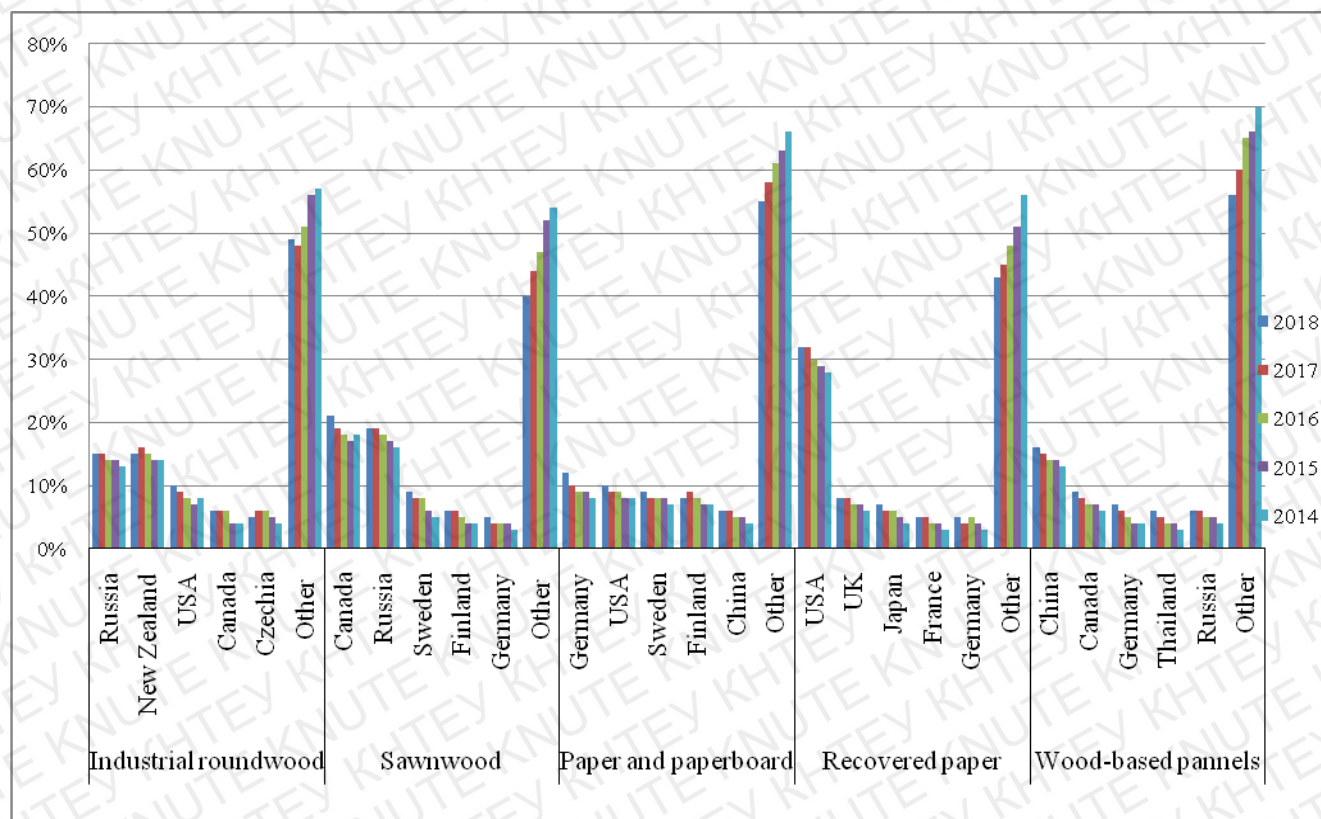


Figure 1.2. The main exporters of the wood products in 2014-2018, % in the world export

Source: conducted by the author based on [15]

The woodworking industry in Ukraine is a prosperous and well-to-do sector of the country, and is also the main source of timber in Europe. This is facilitated by an

existing state program aimed at preserving of state-owned forests and the systematic development of forestry [35]. The highest concentration of forests is in the north and west of Ukraine (mainly pine, beech, oak and spruce). Wood is the main natural raw material in Ukraine. Ongoing production of raw materials from forest resources creates a global demand for certified timber products and timber from Ukraine. The leading countries importing these products are Turkey, Poland, Bulgaria, Austria, Germany, Slovakia and Romania. The timber industry in Ukraine relies on future sustainable growth in the timber industry and on the interest of foreign investors [16]. The state of the Ukrainian enterprise in the world woodworking market can be investigated owing to the analyzing of the PE «Euro Wood».

The most important problem in trade with these products is illegal logging. For many decades, part of the reason why illegal logging and associated trade continued was that consumers did not - and usually could not - distinguish between legally and illegally sourced forest products. This is now changing, as a number of consumer countries take steps to encourage the trade of legal wood and to support the enforcement of forest laws in wood-producing countries [22].

The EU Timber Regulation (Regulation No 995/2010 of the European Parliament and of the Council of 20 October 2010) lays out the obligations of operators and traders who place timber and timber products on the European market. The Timber Regulation has three key components. It prohibits the placing of illegally harvested timber and products derived from illegally harvested timber on the EU market. It requires the “first placer” of timber products on the EU market to exercise due diligence (the operator must have access to information describing the timber and timber products, country of harvest, species, quantity, details of the supplier and information on compliance with national legislation). It requires traders who deal in timber products after the first placing to keep records enabling basic traceability of supply chains [12]. The Regulation covers a wide, but not exhaustive, range of timber and wood products. Products carrying CITE or FLEGT licenses are considered to be legal by default under the EU Timber Regulation [2].

The Lacey Act is a 1900 United States law that bans trafficking in illegal wildlife. There are two major components to the plant amendments: a ban on trading plants or wood products harvested in violation of the law; and a requirement to declare the name, value, quantity, and country of harvest origin for some products. The Lacey Act is a fact-based statute with strict liability, which means that only actual legality counts (no third-party certification or verification schemes can be used to "prove" legality under the Act) and that violators of the law can face criminal and civil sanctions even if they did not know that they were dealing with an illegally logged or harvested product [37].

China's Timber Legality Verification System (CTLVS) involves building capacity for demonstrating legal sourcing of forest products, and preparing guidelines and tools which the forest industry will need to meet China's future requirements on legality, sustainability and corporate social responsibility (CSR). The timber legality verification standard developed by the China National Forest Products Industry Association (CNFPPIA) is envisaged as an important element of CTLVS. The standard applies both to timber harvested domestically and to imported timber. Companies that comply with the standard will be awarded a timber legality verification label by the industry associations that they can use on their timber products. Forest management requirements cover company registration, the payment of taxes, compliance with national laws and regulations, tenure rights, harvesting permits and forest management plans [21].

Taking into consideration the above mentioned, wood market is under control of government authorities. Every country is trying to reduce export and import of illegal wood products and control trade on their markets.

1.2. Analysis of financial and economic activity of PE "Euro Wood"

PE "Euro Wood" is the private enterprise which operates on the wood market and is engaged in various types of economic activities: sawmilling production; manufacture of wooden containers and other products from wood: creating of products from cork, straws and plant materials (main); wholesale of wood, construction materials and so on. For understanding the capability of the enterprise to operate in the market, it is

necessary to review the structure and dynamics of the balance sheet components and financial results. Analysis of the enterprise assets are in the Table 1.2.

Table 1.2

Dynamics and structure of PE «Euro Wood» assets in 2014-2018

Indicator	31.12					Relative deviation, %			
	2014	2015	2016	2017	2018	2015/ 2014	2016/ 2015	2017/ 2016	2018/ 2017
Assets, thousand UAH	325.50	664.40	729.20	1107.50	2156.70	104.12	9.75	51.88	94.74
Non- current assets, thousand UAH	185.30	158.00	121.60	81.40	42.10	- 14.73	- 23.04	- 33.06	- 48.28
% to all the assets	56.93	23.78	16.68	7.35	1.95	-	-	-	-
Incomplete capital investment	8.50	7.90	-	-	-	- 7.06	- 100.00	-	-
Fixed assets	176.80	150.10	121.60	81.40	42.10	- 15.10	- 18.99	- 33.06	- 48.28
Current assets, thousand UAH	140.20	506.40	607.60	1026.10	2114.60	261.20	19.98	68.88	106.08
% to all the assets	43.07	76.22	83.32	92.65	98.05	-	-	-	-
Stocks	37.60	2.20	28.70	6.20	243.60	- 94.15	1204.55	- 78.40	3829.03
Accounts receivable for goods, works, services	17.20	53.10	17.20	286.30	857.80	208.72	- 67.61	1564.53	199.62
Accounts receivable for the budget	0.20	0.30	0.30	59.30	293.40	50.00	-	19666.67	394.77
Other current receivables	42.50	240.00	516.20	621.60	366.60	464.71	115.08	20.42	- 41.02
Money and their equivalents	42.70	210.80	45.20	49.00	337.50	393.68	- 78.56	8.41	588.78
Other current assets	-	-	-	3.70	15.70	-	-	-	324.32

Source: conducted by the author based on materials of [Appendix A]

The total value of PE «Euro Wood» assets is increasing every year and in 2018 assets reached 2156,7 thousand UAH. Non-current assets are decreasing year to year and the biggest value was in 2014. Current assets reached the biggest value in 2018 and

the structure of assets in 2018 mostly consists of the current assets. Current assets are important to businesses because they can be used to fund day-to-day business operations and to pay for ongoing operating expenses.

Liabilities are the money that a company owes to outside parties, from bills it has to pay to suppliers to interest on bonds it has issued to creditors to rent, utilities and salaries. Along with owner's equity, liabilities can be thought of as a source of the company's assets [7]. They can also be thought of as a claim against a company's assets. It is important to understand the structure of it, so analysis of the liabilities is presented in the Table 1.3.

Table 1.3

Dynamics and structure of PE «Euro Wood» liabilities in 2014-2018

Indicator	31.12					Relative deviation, %			
	2014	2015	2016	2017	2018	2015/2014	2016/2015	2017/2016	2018/2017
Liabilities, thousand UAH	325.50	664.40	729.20	1107.50	2156.70	104.12	9.75	51.88	94.74
Equity, thousand UAH	158.90	475.50	441.80	432.50	1521.50	199.24	- 7.09	- 2.11	251.79
% to all the liabilities	48.82	71.57	60.59	39.05	70.55	-	-	-	-
Registered capital	0.50	0.50	0.50	0.50	0.00	-	-	-	- 100.00
Undistributed profit	158.40	475.00	441.30	432.00	1521.00	199.87	- 7.09	- 2.11	252.08
Unpaid capital	0.00	0.00	0.00	0.00	0.50	-	-	-	-
Current liabilities, thousand UAH	166.60	188.90	287.40	675.00	635.20	13.39	52.14	134.86	- 5.90
% to all the liabilities	51.18	28.43	39.41	60.95	29.45	-	-	-	-
goods, works, services	145.20	142.60	162.30	164.20	243.60	- 1.79	13.81	1.17	48.36
settlements with budgets	9.70	14.00	4.60	22.20	43.40	44.33	- 67.14	382.61	95.50
insurance calculations	1.90	1.30	3.60	2.10	11.40	- 31.58	176.92	- 41.67	442.86
payroll calculations	2.20	2.00	7.00	1.10	27.70	- 9.09	250.00	- 84.29	2,418.18
Other current liabilities	7.60	29.00	109.90	485.40	309.10	281.58	278.97	341.67	- 36.32

Source: conducted by the author based on materials of [Appendix A]

The total value of liabilities, as well as assets, in 2018 reached 2156,7 thousand UAH, liabilities mostly consists of the equity in 2018. General value of equity in 2018 is higher, than in 2017 by 252%. Equity shows the share of the property of the enterprise, which is financed by the owners and own funds of the enterprise.

All business owners should regularly evaluate their financial statements in order to understand the financial position of the enterprise. The most important benefit of analyzing company's financial statements is, that it allows to make strategic decisions,

that support growth and long-term profitability. Analysis of the financial results of PE «Euro Wood» is below (Table 1.4).

Table 1.4

Dynamics of PE «Euro Wood» financial results in 2014-2018, ths. UAH

Indicator	Year					Relative deviation, %			
	2014	2015	2016	2017	2018	2015/2014	2016/2015	2017/2016	2018/2017
Net income from sales of products (goods, works, services)	515.40	1064.70	779.40	1544.30	4467.10	106.58	-26.80	98.14	189.26
Other operating income	0.00	0.00	0.00	744.80	83.70	0.00	0.00	0.00	-88.76
Other income	0.00	1.20	8.90	0.10	0.10	0.00	641.67	-98.88	0.00
Total income, thousand UAH	515.40	1065.90	788.30	2289.20	4550.90	106.81	-26.04	190.40	98.80
Cost of sales (goods, works, services)	-292.00	-602.20	-210.30	-1393.90	-2814.60	106.23	-65.08	562.82	101.92
Other operating expenses	70.30	-104.10	-236.60	-841.60	-452.80	-248.08	127.28	255.71	-46.20
Total cost, thousand UAH	-362.30	706.30	446.90	-2235.50	-3267.40	-294.95	-36.73	-600.22	46.16
Financial result before tax	153.10	359.60	341.40	53.70	1283.50	134.88	-5.06	-84.27	2290.13
Net profit (loss), thousand UAH	153.10	359.60	341.40	53.70	1283.50	134.88	-5.06	-84.27	2290.13

Source: conducted by the author based on materials of [Appendix A]

Financial results show, that net profit of PE «Euro Wood» reached the highest value in 2018 - 1283,5 thousand UAH, in 2017 it was only 53,7 thousand UAH. The current situation indicates, that the enterprise has the right strategy and showing success.

For understanding financial state of the enterprise, it is important to analyze indicators or ratios of financial and economic activities and estimate them. Liquidity of the enterprise is the ratio between its payable liabilities and the amount of liquid assets. It determines the rate of the enterprise's ability to meet its obligations [23]. Calculating of PE «Euro Wood» liquidity is represented in the Table 1.5.

Table 1.5

Dynamics of PE «Euro Wood» liquidity indicators in 2014-

Indicator	Optimal value	31.12.2014	31.12.2015	31.12.2016	31.12.2017	31.12.2018
Current ratio	>1	0.84	2.68	2.11	1.52	3.33
Quick ratio	0.6-0.8	0.62	2.67	2.01	1.51	2.95
Cash ratio	> 0.2	0.27	1.12	0.16	0.07	0.53
Net working capital, thousand UAH	> 0	-26.4	317.5	320.2	351.1	1,479.50

Source: conducted by the author based on materials of [Appendix A]

In 2018 liquidity of the enterprise «Euro Wood» had the highest coefficients, than during the previous years. The net working capital of PE «Euro Wood» was 1479,5 thousand UAH. The quick ratio is the highest among the indicators and shows the ability of the enterprise to cover its current liabilities properly. Current and cash ratios have also positive tendency in 2018 in comparison to the previous years. High level of liquidity of the enterprise is a positive factor for creditors and potential investors. However, if the value of current ratio exceeds 3 (very high), careful analysis is needed as this may mean, that excess finances are turning into unnecessary working capital.

Solvency is the ability of a company to meet its long-term debts and financial obligations. Solvency is essential to staying in business as it demonstrates a company's ability to continue operations into the foreseeable future. While a company also needs liquidity to pay off its short-term obligations, such short-term liquidity should not be confused with solvency. While solvency represents a company's ability to meet long-term obligations, liquidity represents a company's ability to meet its short-term obligations. Solvency ratios vary by industry, so it is important to understand, what constitutes a good ratio for the company [29]. Analyzing indicators (Table 1.6), show, that in 2018 solvency of the company was the highest, comparing to previous years. The most positive dynamics is illustrated in relation to the debt to equity ratio, the enterprise paid off majority of its debts and the coefficient in 2018 was in the scope of optimal value – 0.42 (the last time it was in 2014 – 0.95).

Table 1.6

Dynamics of PE «Euro Wood» solvency indicators during 2014-2018

Indicator	Optimal value	31.12.2014	31.12.2015	31.12.2016	31.12.2017	31.12.2018
Solvency ratio	> 0.5	0.49	0.72	0.61	0.39	0.71
Debt to Equity Ratio	< 1	0.95	2.52	1.54	1.56	0.42
The ratio of the security of own working capital	> 0.1	-0.19	0.63	0.53	0.34	0.7
Maneuverability ratio	> 0	-0.17	0.67	0.72	0.81	0.97

Source: conducted by the author based on materials of [Appendix A]

Analysis of business activity is important for understanding, if the net sales revenue covers the average value of assets, accounts payables, accounts receivables, inventory, fixed assets and equity. The increasing of business activity indicators from year to year is very important. In 2018 all the indicators were higher, than in 2017 and almost than in the previous several years (Table 1.7). The highest coefficient - fixed asset turnover ratio indicates, that the business is using its fixed assets well enough to generate large amount of sales.

Table 1.7

Dynamics of PE «Euro Wood» business activity indicators during 2014-2018

Indicator	Optimal value	2014	2015	2016	2017	2018
Asset turnover ratio	increase	0.47	0.54	0.28	0.42	0.68
Accounts receivable turnover ratio	increase	0.86	1.51	0.47	0.51	0.9
Accounts payable turnover ratio	increase	1.43	1.5	0.82	0.8	1.7
Inventory turnover ratio	increase	4.03	13.38	12.61	22.12	8.94
Fixed asset turnover ratio	increase	1.43	1.63	1.43	3.8	18.09
Equity turnover ratio	increase	0.92	0.84	0.42	0.88	1.14

Source: conducted by the author based on materials of [Appendix A]

Profitability ratios compare income statement accounts and categories to show a company's ability to generate profits from its operations. Profitability ratios focus on a company's return on investment in inventory and other assets. These ratios basically show, how companies can achieve profits from their operations. Investors and creditors can use profitability ratios to judge a company's return on investment based on its relative level of resources and assets. In other words, profitability ratios can be used to judge whether companies are making enough operational profit from their assets. In this sense, profitability ratios relate to the efficiency ratios, because they show how companies are using their assets to generate profits [27]. In 2018 profitability indicators were much higher than in 2017 and net income of the company reached 1283.5 thousand UAH. During the previous 4 years, company didn't reach 1000 thousand UAH

(Table 1.8). Return on assets in 2018 was 0,2, return on equity – 0,33, profitability ratio – 0,29 and profitability ratio of products – 1,59.

Table 1.8

Dynamics of PE «Euro Wood» profitability indicators during 2014-2018

Indicator	Optimal value	2014	2015	2016	2017	2018
Return on Assets	increase	0.14	0.18	0.12	0.01	0.2
Return on equity ratio	increase	0.27	0.57	0.19	0.03	0.33
Profitability ratio	increase	0.3	0.34	0.44	0.03	0.29
Profitability ratio of products	increase	1.77	1.77	3.71	1.11	1.59

Source: conducted by the author based on materials of [Appendix A]

Analysis of the enterprise property shows the state of the enterprise fixed assets. Analysis of the property of the enterprise involves the analysis of the composition of the property and its structure, the research of property formation sources, changes in the components of property and sources of its formation. In the process of analysis of assets and liabilities (balance sheet) determines the indicators of structure, balance dynamics, structural dynamics of the balance [28]. PE «Euro Wood» is characterized by a negative tendency in amortization of fixed assets. The primary cost of the fixed assets – 205.9 thousand UAH, was the same during 2016-2018, but amortization was growing during those 3 years. Consequently, for the enterprise it is important to upgrade its fixed assets (Table 1.9).

Table 1.9

Dynamics of PE «Euro Wood» property indicators during 2014-2018

Indicators of financial state of the enterprise	Optimal value	31.12.2014	31.12.2015	31.12.2016	31.12.2017	31.12.2018
Amortization rate of fixed assets	decrease	0.04	0.23	0.41	0.6	0.8
Fixed assets upgrade ratio	increase	0.97	0.05	0.05	-	-
The coefficient of suitability of fixed assets	>0	0.96	0.77	0.59	0.4	0.2
The coefficient of the real value of fixed assets in the property value of the enterprise	>0.3	0.54	0.23	0.17	0.07	0.02

Source: conducted by the author based on materials of [Appendix A]

It is worth noting, that PE «Euro Wood» is a dynamic company, which increases its indicators of liquidity, business activity, solvency and profitability from year to year. But analysis of the enterprise property showed, that company needs more fixed assets in the future. However, in general, company has positive image on the market.

CONCLUSIONS TO THE PART 1

The forest industry plays a vital role in the economies of many countries. Major enterprises, which produce or use forest products generate considerable income and become a workplace for many employees. Owing to the plants all around the world, lots of people have the ability to work, but from year to year modern enterprises are trying to implement new technologies and substitute human work by machinery.

The wood market can propose a wide range of goods and materials, but the most exported and imported during 2014-2018 were the wood products from industrial roundwood, sawnwood, paper and paperboard goods, recovered paper and wood-based pannels. The main exporters and importers of the wood products during 2014-2018 were New Zealand, Austria, Sweden, Canada, Russia, Germany, Finland and China. China is absolute leader in importing industrial roundwood and recovered paper.

The most important problem in wood products trade is illegal logging. Different countries have its own laws regulations and restrictions as China's Timber Legality Verification, The Lacey Act, The EU Timber Regulation etc., in order to save rare tree species.

Ukraine is not in the top of the main exporters and importers of woodworking products, but has a great potential to be among them and moreover has a great forestry area. The financial indicators show the ability of the Ukrainian enterprise PE «Euro Wood» to strengthen its positions on the local market and to expand its activity abroad. The enterprise showed the positive tendency in dynamics and structure of the assets, liabilities and financial results. Especially positive for the enterprise was 2018 year. It was defined, that growth of the financial indicators in 2018 was higher, than the previous years. Current assets reached the highest value in 2018 and the structure of assets in 2018 mostly consists of the current assets (98.5%).

PART 2. ASSESSMENT OF THE COMPETITIVE ADVANTAGES OF PE “EURO WOOD” ON THE WORLD MARKET OF THE WOODWORKING PRODUCTS

2.1. Diagnostics of the internal and external environment of PE «Euro Wood»

Private Enterprise «Euro Wood» is a dynamic company which produces pallets, euro-pallets, wooden containers, blanks for pallets, lumber, boards, timber, laths, logs etc. Different external factors have their influence on the position of the company. PEST analysis gives the opportunity to identify the macro-environmental factors used in the environmental scanning components of strategic management. It can be used for reviewing a situation, choosing a strategic direction of a company and in the process of evaluating its competitive position on the market. As well, the analysis is a useful tool for identifying the advantages of the company using the opportunities and reducing the threats. Without identifying external factors, which affect the activity of the company, it is difficult to manage the business in an efficient manner. PEST analysis of PE «Euro wood» is below (Table 2.1).

Table 2.1

PEST analysis for PE «Euro wood»

Factors	The influence of the factor	Significance assessment
Political factors		
Political instability in the state	2	0,6
The presence of state antitrust regulation	1	0,2
Change of laws in Ukraine	1	0,2
Economic factors		
The volatility of the currency rate	2	0,33
High unemployment rate	1	0,17
The level of inflation	2	0,33
The cost of energy	1	0,17
Socio-cultural factors		
Employment of the population	2	0,4
Rising of retirement age	1	0,2
Predisposition of the population for a business activity and independence	2	0,4

Table 2.1 (Continued)

Factors	The influence of the factor	Significance assessment
Technological factors		
Access to innovative achievements	2	0,33
A funding source for the acquisition of new technology	2	0,34
Conducting research and development activities in the areas of activity of the enterprise.	2	0,33

Source: conducted by the author.

Political factors such as laws and regulations, which restrict or forbid export of the wood goods have influence on the business activity of the woodworking enterprises. According to Law No. 2860, the sale outside the customs territory of Ukraine of the wood products by the subjects of entrepreneurial activity is allowed in case of the presence of a certificate of the wood origin and wood products produced from them [13].

According to Art. 1 of Law No. 2860, the following requirements apply to:

- timber - timber that is extracted by splitting into pieces of fallen trees and logs (longitudinally or transversely) for further use or processing
- unprocessed timber - timber according to code 443 of group 44, section X, UCG FEA
- lumber - timber of a certain size and quality having at least two planar-parallel layers (Chapter IX, Group 44, Code 4407 UCG FEA)

The mechanism of issuing certificates of origin of wood and wood produced for export operations, determined by the Provisional Procedure, applies to all business entities irrespective of the form of ownership engaged in export operations with timber and timber produced from them.

Art. 17 of Law No. 959 establishes that Ukraine is prohibited from exporting natural resources that are exhausted if restrictions also apply to domestic consumption or production. The list of such goods is determined solely by the laws of Ukraine.

According to Art. 2 of Law No. 2860 it is prohibited to export timber and timber of valuable and rare species of trees, such as acacia, beech, cherry, pear, walnut, chestnut, cherry, maple, juniper, outside the customs territory of Ukraine [13].

Taking into consideration above mentioned, PE «Euro Wood» is operating meeting the requirements of the laws.

Economic factor, such as volatility of the currency rate, has important influence on the volume of exports. Because of exchange rate fluctuations, volumes of export can decrease [34]. High inflation can lead to selling of the wood products with a low cost and losses at the end of the financial year. Because of unstable situation in the country, the value of cash for PE «Euro Wood» is changing very often.

Socio-cultural factors also play an important role in the wood industry. Currently, many people decide to work as marketers, lawyers, economists and a small amount of people want to work in the sphere of goods production. For the country it's important to encourage new employees to be interested in this industry and provide appropriate workplaces. PE «Euro Wood» can improve working conditions inside the company and attract new employees. Another important aspect is demographic situation, because markets consists of people and their growth potential depends on the dynamics of demographics. Predicting changes in these factors allows an organization to anticipate changes in expectations in the community as a whole or in individual groups, and take action to improve their products and services compared to competitors.

Technological factors have a great impact on the activity of the enterprise. Analyzing PE «Euro Wood» property indicators, it is worth implementing new innovative technologies. This implementation allows taking into account the possibilities of scientific and technological progress (NTP) for the production of new products and improvement of the manufactured ones, as well as the technology of goods production.

SWOT analysis is also vital strategic planning tool, that can be used to provide a situational analysis of the firm. It is a useful technique to map out the existing strengths (S), weakness (W), opportunities (O) and threats (T) PE «Euro Wood» is facing in its current business environment [32]. The purpose of SWOT analysis is not to find out all

the strengths and weaknesses; it is too difficult and does not ensure efficiency. The business should focus on those factors, that can be a key for success or failure, and the overly comprehensive list eliminates, what matters the most [33]. The SWOT analysis for the enterprise is presented below (Table 2.2).

Table 2.2

SWOT analysis for PE «Euro Wood»

Strengths	Weakness
1. Guaranteed product sales	1. High level of equipment amortization
2. Favorable economic and socio-economic situation for entering new markets	2. Dependence on currency fluctuations
3. Provision of production space	3. Attracting additional funds for new fixed assets
4. Availability of investment resources	4. National regulatory system in the sphere of foreign trade
Opportunities	Threads
1. Expanding markets due to market growth	1. Instability of sales
2. Practical absence of competitors	2. Competitors can implement new innovative technologies
3. Reduction of cost by implementation of new technologies	3. The increase of the production cost
4. Obtaining large orders	4. Political instability
5. Secession of competitors from the industry	5. Exchange rate fluctuations
6. Low competitive advantages of main competitors	6. Refusal of banks to provide long-term loans

Source: conducted by the author.

Establishing links between the most influential weaknesses and strengths of the organization, the aspirations and opportunities of the environment is the final stage of the SWOT analysis process. To establish relationships, a SWOT analysis matrix is displayed, as shown in the Table (2.3).

Table 2.3

SWOT analysis matrix for PE «Euro Wood»

S + O	W + O
1. Entry into the new markets, diversifying the product lines will allow to provide stable financial indicators	1. Increased competition, government policy, inflation and tax regulation will influence the strategy's implementation
2. Sufficient popularity will facilitate entry into new markets	2. New technologies of competitors will provide additional costs for the enterprise
3. Qualification of personnel, quality control, unsuccessful running a business of competitors will give an opportunity to keep up with market growth	3. Establishment of modern management and organization of work
S + T	W + T
1. Borrowing “expensive” loans	1. Unfavorable state policy can lead to the secession from the industry
3. The constant search for new suppliers will reduce the possibility of maneuvering in the finance and sales markets	2. Incomplete capacity utilization in the context of rising inflation and currency rate fluctuations can lead to bankruptcy.
3. Expanding the range of products	3. Constant decline in product quality against the backdrop of increasing customer demands.

Source: conducted by the author.

For diagnostics of the external environment it is important to analyze activity of the main competitors of PE «Euro Wood» in the woodworking industry. Among the companies, which produce similar products in Ukraine and export abroad, are Uniplyt LLC, Ukrainian Woodworking Company LLC, UKRAINIAN Sawmills LLC and etc. [39].

“Uniplyt” LLC is the leader of the wood processing industry of Ukraine in the segment of production of fiberboard, 3D-painted fiberboard, plywood and lumber. It offers one of the most comprehensive selections of high-quality wood-based products available from a single manufacturer. As an integrated company with manufacturing facilities in Western Ukraine and warehouses all over the country, company provide immediate access to a tremendous selection of products in a wide array of configurations. Company sells products mainly in the markets of Ukraine, CIS and Europe [40].

"Ukrainian Woodworking Company" is a leading company in the woodworking industry of Ukraine founded in 2004. The company's manufacturing facilities are located in the city of Kostopil, Rivne region. UWC performs a complete cycle of wood processing, starting from sawing to producing final products. The UWC is equipped with modern equipment of such companies as Weinig Group, Wintersteiger and Leitz. Company uses the most advanced woodworking equipment, such as WINTERSTEIGER NOTUM machines, the GRECON ULTRA TT line, the Roll Grinder and many other tools. This equipment allows to achieve the highest quality of products [42].

The company "Ukrainian Sawmills" LLC has production capacities in the Rivne Region in North Western Ukraine. The company is processing raw material, which is FSC®* certified. "Ukrainian Sawmills" LLC is specialized in production of pine dry sawn goods with modern Scandinavian sawmilling, kiln-drying and quality sorting technology [41].

Taking into account it, managers of PE «Euro Wood» should monitor its financial and economic activity and innovative activity of the competitors as well. It will provide necessary information for identifying new ways of improvement of the production and quality of goods.

2.2. Evaluating of PE "Euro Wood" competitive advantages on the market of woodworking products

Competitive advantages are conditions that allow a company or country to produce a product or service of equal value at a lower price or in a more desirable way. These conditions allow a manufacturing entity to generate more sales or an advantage over its competitors on the market [11]. A firm's ability to produce a good or service more efficiently, than its competitors, which leads to greater profit margins, creates a comparative advantage. The more durable is the competitive advantage, the more difficult it is to neutralize the advantage for competitors [31].

PE «Euro Wood» was founded in 2004 and till now is operating on the market of goods and services in the sphere of woodworking. The production area of the enterprise

exceeds 4000 sq.m., the area involves more than 15 units of woodworking equipment. The company's products are competitive and of a high quality due to more than 40 highly qualified specialists, who are constantly working at the enterprise. PE «Euro Wood» exports majority of its products to the EU countries. Demand in pallet blanks, edge boards, bars, wood lath etc. is growing up from year to year. Among the importers are companies from such countries, as Turkey, Poland, Romania, Germany, Hungary and Moldova. Enterprises from those countries imports different types of the goods for more than 5 years and have stable business relationships with PE «Euro Wood». The geographical structure of export of the company in 2014 is below (Figure 2.1). Poland had the largest share in geographical structure of export in 2014 – 27%, the second place took Hungary with the indicator of 24%.

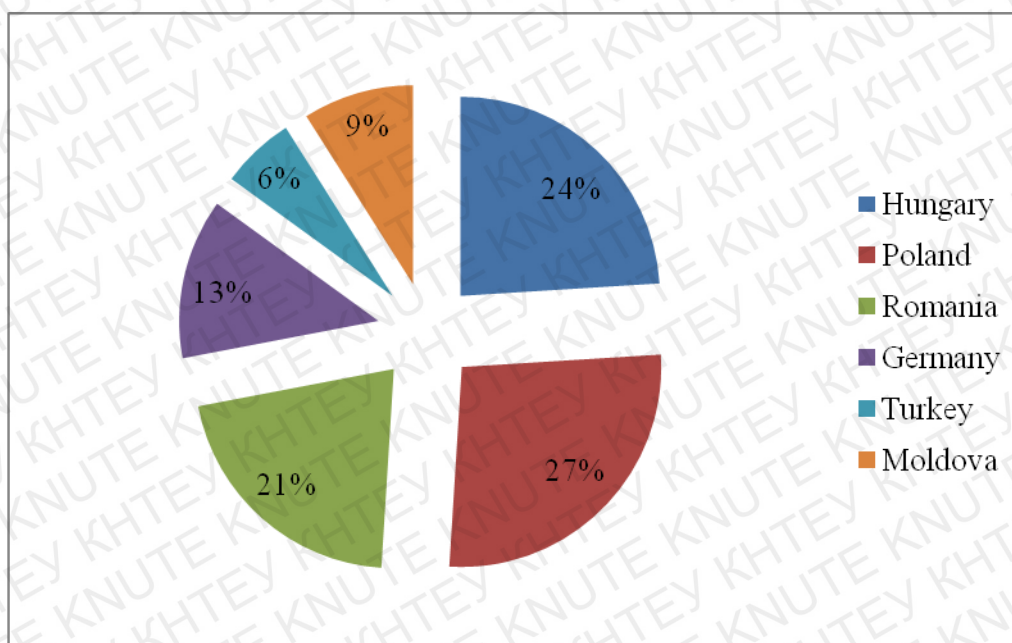


Figure 2.1 Geographical structure of PE «Euro Wood» export in 2014

Source: conducted by the author.

In 2018 the structure of PE «Euro wood» export was almost the same as during the previous year (Figure 2.2). The share of Poland in total export was 29%, while the share of Hungary – 23%, Romania – 18%, Germany – 12%. This indicates, that PE «Euro Wood» has a stable relationships with the importers. Thus, it can be noted, that a company has competitive advantages in its disposal.

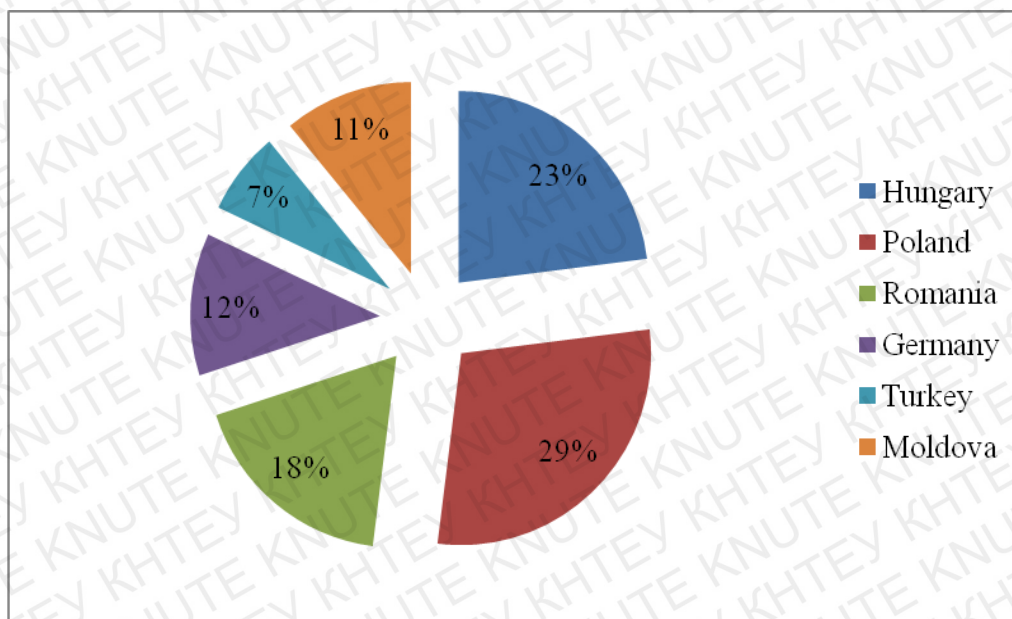


Figure 2.2 Geographical structure of PE «Euro Wood» export in 2018

Source: conducted by the author.

Among the competitive advantages of PE «Euro Wood» in trading abroad are: good quality of the products, fast delivery and good image of the company. Consequently, more and more companies from listed countries tend to deal with PE «Euro Wood».

Products which were exported by PE «Euro Wood» during the last 5 years are represented in the Table 2.4 below.

Table 2.4

Dynamics of net income from export sales of PE «Euro Wood» in 2014- 2018 according to its commodity structure, ths. UAH

Product	2014	2015	2016	2017	2018
Pallet blanks	96,28	189,54	192,65	263,26	1020,56
Edge boards	85,69	170,76	106,35	228,43	687,85
Unedge boards	74,74	102,34	120,75	103,01	287,83
Wooden bars	82,99	219,87	110,43	228,76	653,90
Wooden pallets	105,23	170,73	173,45	320,49	930,76
Total	444,93	853,24	703,63	1143,95	3580,90

Source: conducted by the author.

Among the exported goods the most popular on the external market are pallet blanks and wooden pallets. One of the hugest competitive advantages of wooden pallets and pallet blanks is that, unlike plastic containers, they are repairable. At reasonable

prices, PE «EuroWood» is ready to repair damaged pallets, which will significantly extend its life.

The quality of the wooden pallets, which company produces, is ensured through the use of advanced production technologies with a modern production base located directly near the sources of high-quality raw materials (wood), which allows PE «Euro Wood» to offer customers not only the good price on the market of wooden pallets, but also to provide in a short time large volumes of final products: pallets and according to the individual orders of buyers. The existing equipment allows to provide the production of wooden pallets according to the individual drawings of customers, taking into account all the requirements for the design of the pallet. The company guarantees an uninterrupted supply of ordered batches of pallets. By agreement, the company can provide pre-production of pallets, storage of pallets in its warehouses or delivery of pallets to the customer by the transport of the enterprise «Euro Wood».

All pallets undergo in-line quality control at all stages of production. A high standard of quality is the result of more than 10 years experience and continuous improvement of pallet production technology. Company value is the trust of its customers and its high reputation on the market of wooden pallets. That's why the enterprise provide continuous technological quality control at all stages of the production of pallets, starting from the harvesting of wood to packaging before delivering to the customer.

PE «Euro Wood» carries out full-cycle wood processing, including, the production and sale of blanks for wooden pallets (pallets) used in the storage of goods and their movement with special mobile hoisting mechanisms. PE «Euro Wood» produces the pallet blanks both in the form of individual elements of pallets and as a complete set for independent assembly of a pallet by the customer. For example, for inexpensive pallets PE «Euro Wood» offer a pallet blank made of pine and hardwood. As a result, the enterprise get a blank for pallets, the cost of which is much lower, than blanks for export.

Depending on the raw materials used, the company-supplied blanks for wooden pallets are classified into several grades. Using advanced technologies and modern

equipment, PE «EuroWood» produces highly competitive products, which are characterized by the optimal ratio of price and quality.

Lumber - a product, which is necessary in the construction of a wooden or brick buildings. They are made from different species of wood in specialized woodworking complexes. A method of obtaining the final product is sawing logs of trees. Depending on the needs of the construction, PE «Euro Wood» manufactures lumber on band saws, circular saws or sawmills. Based on this, lumber, according to the assortment, is divided into the following types: timber, wooden bars, edge and unedge boards, wooden rails etc. PE «Euro Wood» in lumber manufacturing generally uses deciduous and coniferous trees. Among hardwoods the most valuable are: oak, beech, birch, and ash. Lumber from pine, spruce and other conifers are less popular and have other areas of using.

A rounded log - tree trunk, which is processed by PE «Euro Wood» on specialized equipment, as a result of which it has the same profile along the entire length. The manufacture of rounded logs consists of the cutting off the top part of the sapwood, leaving a strong and solid core. Pine is most often used as a raw material. Due to a similar production technology, i.e. the removal of sapwood, a round log has the advantage by reducing the number and depth of cracks, that appear on the log. This material is used in the construction of baths, country houses and cottages. Due to the fact, that the same diameter is observed along the entire length of the log, it is quite simple and convenient to build from rounded logs.

For the production of rounded logs PE «Euro Wood» uses pine of 1st grade. Each batch of the forest is checked for the presence of radioactive particles, and the enterprise can confidently declare, that its products are environmentally friendly and safe. The length of the logs ranges from 3 to 6 meters with a diameter of 160 to 280 mm. It is also possible to manufacture special logs with a length of 6.8 meters.

Dynamics of commodity structure of PE «Euro Wood» export is presented in the Table 2.5. As we can see, pallet blanks in 2018 had a share – 28,5%, while wooden pallets – 25,99%.

Table 2.5

Dynamics of commodity structure of PE «Euro Wood» export in 2014- 2018, %

Product	2014	2015	2016	2017	2018
Pallet blanks	21,64	22,21	27,38	23,01	28,50
Edge boards	19,26	20,01	15,11	19,97	19,21
Unedge boards	16,80	11,99	17,16	9,01	8,04
Wooden bars	18,65	25,77	15,69	20,00	18,26
Wooden pallets	23,65	20,01	24,65	28,02	25,99
Total	100,00	100,00	100,00	100,00	100,00

Source: conducted by the author.

The Table 2.6 presents the calculation of export efficiency of PE «Euro Wood» in 2014-2018. According to the information in the table below, we identified, that PE «Euro Wood» has positive export efficiency dynamics. It means that net income from export sales exceeds expenses on the goods production and export expenses.

Table 2.6

Dynamics of export efficiency indicator of PE «Euro Wood» in 2014-2018

Indicator	2014	2015	2016	2017	2018
Net income from export sales, ths. UAH	444,93	853,24	703,63	1143,95	3580,90
Cost of export sales, ths. UAH	289,20	571,67	436,25	720,69	2255,97
Export expenses, ths. UAH	62,29	110,92	119,62	160,15	393,90
Export effect, ths. UAH	93,44	170,65	147,76	263,11	931,03
Export efficiency	1,27	1,25	1,27	1,30	1,35

Source: calculated by the author.

The products of the enterprise are interesting for the consumers and such indicator as export efficiency confirms it. As comparative advantage it may be noted, that there is an opportunity for the enterprise to make its prices lower. On the basis of the price-list of 2018 (Appendix B) in Table 2.7 we calculated the mark-up for the most popular goods.

Table 2.7

Assessment of PE «Euro Wood» export prices mark-up in 2018

Product	Price converted to UAH*	Cost of production per m³, UAH	Net price, UAH	Mark-up
Pallet blanks	3798.00	1345.39	2452.61	0.65
Edge boards	4115.00	1456.88	2658.12	0.65
Wooden bars	4115.00	1456.87	2658.13	0.65
Wooden pallets	4115.00	1456.95	2658.05	0.65

*28.65 – average exchange rate USD/UAH in 2018

Source: conducted by the author.

As a result of the calculations, we determined, that the price of the exported materials in 2018 have the same mark-up – 65%. Thus, with the aim to expand sales abroad and in order to enter new markets PE «Euro Wood» can reduce its prices. For example, the enterprise can hold a promotion for a particular period with special discounts for some products.

CONCLUSIONS TO THE PART 2

In this part we revealed the factors of the external and internal environment, that directly impact on the activity of PE «Euro Wood». On the basis of PEST and SWOT-analysis we defined, that enterprise operates in an external environment, which is characterized by a high level of equipment amortization, dependence on currency fluctuations and attracting additional funds for new fixed assets.

According to the results of SWOT-analysis of the company, we concluded, that among the strengths of PE «Euro Wood» are: the favorable economic and socio-economic situation for entering new markets and the high interest of investors in development of the wood industry. Among the threads - company`s competitors can implement new technologies earlier, than PE «Euro Wood» and as a result to take greater part of the market. However, if PE «Euro Wood» implements technologies, it will reduce its production costs in the future.

According to the PEST-analysis, we revealed political, economic, social and technological factors, that have influence on the PE «Euro Wood» activity. Worth mentioning, that Ukrainian laws predict high level of control over the trade of the wood products abroad, for example, Art. 17 of Law No. 959, Art. 1 and 2 of Law No. 2860. Some of them predicts gaining the certification for producing goods made of the wood and prohibition of export valuable timber and rare species of trees, such as acacia, beech, cherry, pear, walnut, chestnut, cherry, maple, juniper and so on. PE «Euro Wood» is providing its activity, meeting the requirements of the laws.

Assessment of the geographical and commodity structure of PE «Euro Wood» shows, that the enterprise has good image and a wide range of the products exporting abroad. Among the exported goods the most popular on the external market are pallet blanks and wooden pallets. One of the hugest competitive advantages of wooden pallets and pallet blanks is that, unlike plastic containers, they are repairable. At reasonable prices, PE «EuroWood» is ready to repair damaged pallets, which will significantly extend its life, and consumers don't have to buy new ones. Another competitive advantage of PE «Euro Wood» is using advanced technologies for processing of the raw materials. Moreover, its equipment allows to produce the goods according to the individual drawings of customers, taking into consideration all their needs. The enterprise provide continuous technological quality control at all stages of the production from the harvesting of wood to packaging before shipping to the customer. Due to the agreement, the company can provide pre-production of pallets, storage of pallets in its warehouses or delivery of pallets to the customer by the transport of the enterprise. Worth mentioning, that PE «Euro Wood» produces the pallet blanks both in the form of individual elements of pallets, and as a complete set for independent assembly of a pallet by the customer. Another competitive advantage of the enterprise is, that for the production of rounded logs PE «Euro Wood» uses pine of 1st grade. Each batch of the forest is checked for the presence of radioactive particles, and the enterprise can confidently declare, that its products are environmentally friendly and safe.

PART 3. WAYS OF ENHANCING THE COMPETITIVE ADVANTAGES OF PE “EURO WOOD” ON THE WORLD MARKET OF WOODWORKING PRODUCTS

3.1. Development of the complex of measures for increasing the competitiveness of PE "Euro Wood"

Improving operational efficiency and streamlining organizational structures increase the cost competitiveness of the enterprise production. Competitiveness can be higher due to the process of innovations and services, that reduce production costs and increase the value added of products [26]. At the same time, new knowledge, technology, expertise and new operating models for creating more competitive and customer-oriented products need to be developed by PE «Euro Wood» [30].

The production of fuel pellets from waste wood for the production of thermal energy is increasing annually. The process of production of fuel pellets, as well as fuel briquettes, consists of the process of pressing the crushed waste of wood, straw, husks and others. Pellets are a real alternative to coal, gas and oil. The technology for producing such products is quite new. Consequently, Ukrainian entrepreneurs are interested in development of this sphere [24]. The production of this kind of product we can implement at PE «Euro Wood».

The current situation in Ukraine in the energy market is quite complicated. The main type of fuel in the communal sphere is natural gas. Production of domestic natural gas in Ukraine does not cover the needs of its use even by 10-15% [20]. There is an energy dependence on external suppliers of natural gas, and gas prices are rising rapidly. The use of other fuels (solid and liquid fuels, solar, wind) is poorly developed and has some drawbacks in its use, for example, transportation, inconvenience of storage, the presence of waste during combustion (high ash content), significant initial capital investment in equipment (especially when using solar and wind energy) [8].

Instead, there is a considerable amount of industrial waste in the territory of Ukraine, from which it is possible to obtain relatively cheap fuel [6].

Such wastes may include sawmill waste, wood chips and sawdust, waste from deforestation, winter straw, fire (flax processing waste), packaging material and

packaging used, etc. In comparison to the usual fuels, such pellets will be cheaper and more effective (Table 3.1). PE «Euro Wood» can take an advantage from producing such pellets and raise the interest of consumers to the company.

Table 3.1

Comparative data on the energy value of different fuels and their value

№	Type of fuel	Combustion heat	Calorie content, kcal / kg	% cinder	% sulfur	Price
1	Coal	15-25 MJ/kg	4500-5200	13-35	1-3	4000-7000 UAH / t
2	Brown coal	14-22 MJ/kg	4000-4300	13-35	1-3	2900-5000 UAH / t
3	Firewood	10 MJ/kg	2000	2	0	1100-1900 UAH / t
4	Pellets of peat	18.0 MJ/kg	4500-4800	6	0,7	1200-2000 UAH / t
5	Fuel pellets	18.4 MJ/kg	4800-5000	2,5	0,1	2200-3300 UAH / t
6	Peat briquettes	14.9 MJ/kg	3200	23	1-3	1800-2800 UAH / t
7	Natural gas	35-38 MJ/ m ³	8700-9500	0	0	6,463 UAH/ m ³

Source: conducted by the author based on [14]

For wood pellets, the calorie value of burning is 4800-5000 kcal / kg, which can be converted to 5,580-5,815 kW / kg. This is enough to heat a house of 55-60 m² for one hour [38]. To get 10,000 kcal of thermal energy, it is necessary to burn 5 tons of firewood with a moisture content of more than 20%, for which it is necessary to spend 9500 UAH. To get the same amount of heat from the pellets, you need to burn about 2 tons of wood pellets and spend 6600 UAH. The cost of 1 kcal for firewood is 0.95 UAH and the cost of 1 kcal for burning pellets is 0.66 UAH.

When burning 1000 kg of fuel pellets there is as much thermal energy, as when burning:

- 1600 kg of wood;
- 475 cubic meters of natural gas;
- 500 liters of diesel fuel;
- 685 liters of fuel oil.

The comparative data on the consumption of different types of fuels to produce heat for 1 hour is represented below (Table 3.2)

Table 3.2

Comparative data on the consumption of different types of fuels to produce heat for 1 hour

№	Type of fuel	Fuel consumption per hour
1	Coal	4.8 kg
2	Brown coal	17.1 kg
3	Firewood	12.9-10.8 kg
4	Wood pellets	6.91 kg
5	Natural gas	3.5 m ³

Source: conducted by the author based on [14]

To the other benefits of using pellets as fuel we can refer [8]:

- the amount of residual combustion (cinder) is from 2.2% to 10% of the total volume of pellets used;
- the pellet burning process is fully automated;
- convenient transportation and storage (the required area for pellets is 2 times smaller than when transporting or storing firewood or peat briquettes);
- absence of harmful emissions in the process of products combustion.

According to the experts' opinion, in order to provide sufficient raw materials for biofuel production in the world, plantation areas have to be approximately 27 million hectares, which will be enough to produce 400 million tons of pellets [3]. This method is quite productive: during 1 year from 1 hectare the enterprises can produce 20 tons of dry hardwood or 16 tons of coniferous species. However, from such raw materials companies can make only standard industrial pellets, as plantation wood is processed with bark in the wood chips [4]. In a number of European countries, as well as in China, Australia and the USA, manufacturers use poplar wood in plywood production, while fast growing willow trees - in the production of wood pellets and wood chips.

Due to the global economic crisis, sawmills and woodworking enterprises have declined their economic activity worldwide and, as a result, raw material prices and,

consequently, the final cost of the pellets increased. Several years ago manufacturers used sawdust and chips as the main raw material for the production of wood pellets. Later, manufacturers started to use the wood chips. However, if the producers use only chips as raw material, then the cost of raw materials would be about 70% of the final product cost structure. This is one of the reasons, why nowadays, in Germany for example, biomass-fired TPPs don't use pellets, although the cost of the wood chips is less, than the cost of the pellets and the raw materials for the production of the wood chips within a radius of about 100 km from stations are quite enough.

About 20% of producers in both Europe and Canada use round timber to produce pellets. One of the variants of raw materials for the production of industrial pellets was the use of so-called «forestry» or «green» wood chips (residues after logging: twigs, branches, tree tops, stumps, non-standard wood). Thus, for such raw materials are new European standards of the industrial granules production, in which the maximum content of ash in final products has been increased from 1.5 to 3% [1].

An alternative to wood pellets are agro-pellets for which raw materials are straw, sunflower husk, flax, rape and hemp. TPPs and individuals use these pellets, and in recent years private sector representatives as well. A large number of manufacturers of boiler equipment have now expanded the range of specialized and combined boilers for the use of agro-pellets and briquettes [5].

In the first stage, it would be important for PE «Euro Wood» to find a raw material base, that has a sufficient amount of dry (up to 20% moisture) carpentry chips or sawdust, as a by-product of basic production with a sufficiently deep processing tree. The importance of the approach of raw material preparation from the outset can increase the risk of the entire project, which is related to the quality of the final product (pellet), its high cost, fire safety of technology and reliability.

Dump truck or other motor-vehicle transport can bring raw materials (wood waste, peat) to the PE «Euro Wood». The dump truck unloads the wood materials on a special receiving device. Raw material can also be unloaded at the storage area and loaded onto the receiving tray using a self-propelled bucket loader or bulldozer [24]. After loading, the tray, with the help of hydraulic cylinders, rises up and the raw

material is poured onto the moving part of the conveyor. The conveyor, equipped with devices for leveling and dosing, supplies the required amount of raw material to the separator, where a large fraction of the chips, tubers, etc., is released, after which the conditioned raw material is fed through the scraper conveyor into the drying drum.

Currently, the manufacturers offer granulation equipment, that has undergone significant modernization. The pellets produced on such equipment have high density, resistance to wiping with a minimum amount of dust and vitreous luster.

Despite of the considerable experience in briquetting of coal, peat, wood waste and vegetable waste, in recent years leading manufacturers of such equipment have been more actively engaged in improving the equipment for the production of fuel pellets from dry and wet biomass according to the European and North American standards (DIN, SS, PFI). Recently developed technological complexes (modules) of the container type are suitable for the production of quality fuel pellets from dry shredded waste of woodworking and agricultural production, for example, dry chips, sawdust, small dry chips with a fraction up to 15 mm, grain waste, husk and sunflower and the humidity of raw materials should be in the range of 12-15%, but not exceed 16% [29].

The technological pelletizing complex of a container type with a press of 110 kW (possibly up to 200 kW) is the modern model of pellet complexes, which is appropriate for PE «Euro Wood». The productivity of the complex based on dry wood chips is 900 kg / h (up to 1600 kg/hour of pellets with a diameter of 8 mm). On a 6mm matrix, the performance will be 10-12% lower. The technological complex of granulation with the preparation section and drying of raw materials with a total productivity from 2.5 to 15 tons per hour (using as raw materials "round" wood, as well as other various sawdust waste), on grain waste, sunflower husk and peat increases productivity by 1.5 times [30].

Complex of technological equipment in containers of modular type offers such significant additional benefits, as [1]:

- such modules do not require heavy stationary foundations, which reduces construction costs;

- significantly reduced terms of implementing new equipment (3 - 4 months from ordering the equipment to implementing the idea into practice).

Currently, manufacturers of fuel pellet equipment can offer PE «Euro Wood» modular arrangement of equipment on a single steel pellet frame. Presses with a productivity of 2,5 tons an hour are used, in the module it is possible to install 2 presses, by increasing the number of modules it is possible to rise productivity in 2-3 times. The installation of such modules does not require heavy foundations, the installation time is significantly reduced. If necessary, the modules are quite easy to transport to another location [31].

Additionally, it is possible to supply the following types of equipment:

- mechanized container hopper of raw materials with the hydraulic drive and the auger, from 70 cubic meters (heavy-duty);
- automatic packaging line;
- packer;
- semiautomatic device for packing fuel pellets into bags weighing 10-20 kg;
- thermal insulation of containers with ceramic insulation (12 years).

Time for the equipment delivery is approximately 18 weeks. Delivery on leasing terms is possible as well. For example, if the cost of equipment is 800,000, the lease term is possible up to 36 months (advance payment of 20%, increase of cost 8,3% of the cost of equipment per year, insurance - 0,45% per year).

Taking into consideration above mentioned, first of all, it is necessary to provide production of fuel pellets from wood waste or other wood waste on PE «Euro Wood». But for better understanding the results of the proposed measures and necessary financial resources on the project realization, it is important to evaluate all the costs, to compare prices and to define, what kind of impact it would have on the profitability.

3.2 Forecast evaluation of proposed measures for PE "Euro Wood"

Consequences of new technologies implementing and its impact on the production process on PE «Euro Wood» must be carefully calculated and evaluated. First of all, it is necessary to take as a basis of the calculation the capacity of the

equipment for granulation 1100 kg/hour. Equipment with less productivity reduces the level of production profitability. Choosing more effective equipment for a stable supply of raw materials requires closer scrutiny and more specific monitoring of the resource base. If this possibility is available, the calculated productivity of 1100 kg/hour can be easily converted into two installations with a capacity of 1100 kg / hour each of them.

As a basis we can use the raw materials of forestry production, such as:

- sawdust of sawmill frames;
- joinery and woodworking waste;
- wastes from deforestation (branches, bushes, gauge, etc.)

Evaluation of the proposed measures profitability for PE «Euro Wood» is represented in Table 3.3.

Table 3.3

Calculation of the production profitability for PE «Euro Wood» on the basis of proposed measures

№	Indicator	Unit	Value
1	Installation performance	kg/hour	1100.00
2	Quantity of raw materials needed per month with press loading of 62% relative to 24 h/day	m ³ /month	1720.00
3	Quantity of raw materials needed per month with press loading of 62% relative to 24 h/day at humidity above 20%	m ³ / month	2680.00
4	Cost of raw materials supply per month: at humidity above 20%	UAH/month	11625.15
5	Electricity costs (capacity 200kW)	UAH/month	5861.00
6	Costs of staff support (certification, training)	UAH/month	5000.00
7	Other unforeseen operating costs	UAH/month	15000.00

Table 3.3 (Continued)

	Total cost per month:	UAH/month	37486.15
9	Net income from products sales	UAH/month	46653.90
10	Monthly revenue	UAH/month	9167.75
11	Year revenue	UAH/year	110012.98
12	Monthly profitability	%	24.46

Source: conducted by the author.

According to the technical characteristics of the installation, the dense volume of raw materials required for the production of pellets with a capacity of 1100kg / h - 1720m³ / month at humidity less than 16%, and 2680m³ / month - at a humidity more than 20%. The press works 446 hours in a calendar month.

Thus, the volume of final goods produced is: $446.4 \times 1100 = 491040$ kg/month. Accordingly, to ensure the work of the «press» PE «Euro Wood» has to the following costs for delivery of the raw materials. If the supply of raw materials with a humidity more than 20% is required, the required quantity for loading the press is 2,680 m³ / month. With this volume of transport can handle three trucks type «ZIL – 131» with a size of 18.75 m³ (2.5 x 5 x 1.5) each. In one shift (9 hours), they will be able to transport, making three moves each of them, a volume of raw materials equal to: $18,75 \times 3 \times 3 = 168,75$ m³/shift.

Three trips over a nine-hour shift are required:

- to overcome the distance from the area where the raw materials are unloaded to the place of installation of the "press" not less than 30km, which in the sum ("there" - "back") is 60 km (it takes about 1.5 hours);
- to spend approximately 1.5 hours on loading and unloading operations.

Thus, the total time spent on one movement will be three hours. One truck can make three movements in one shift.

For the month there should be used at least 16 days for delivery of all the raw materials: $2680\text{m}^3/\text{month} \div 168.75\text{m}^3 = 16$ days, which are available during 21 working days per month, even taking into account holidays, weekends, possible car breakdowns, or any unforeseen failures, when delivering raw materials. In the absence of unforeseen

situations, it is possible to bring an additional quantity of raw materials ("heavy - date") into the reserve of raw materials ($21 - 16 = 5$) at the expense of a spare 5 working days: $5 \text{ days} \times 3 \text{ auto} \times 18.75\text{m}^3 \times 3 \text{ trips} = 843.75\text{m}^3$.

Note: The distance of the areas, where the raw materials are loaded must not exceed 30km from the place of installation of the press, which is conditioned by the presence of a power source with a power of not less than 200kW. PE «Euro Wood» could buy raw materials in LLC "Lisova Hildiya" from the Brovary, which is not far from Birky. Otherwise, the cost of transportation of raw materials increases to a loss of production as a whole.

Worth mentioning, that employees of PE «Euro Wood» should pass certification training with the aim to be qualified and competent in producing fuel pellets. Corporate training for employees costs 5 ths. UAH per month.

The next important step is calculation of the current profitability of this project. For the first time company can gain a profit 1000 UAH per ton, with payback for the project in 1 years (Table 3.4). For the implementation of the project it is important to encourage investors and present this plan, with the aim to improve fixed assets of PE «Euro Wood».

Table 3.4

Calculation of return on investment for PE «Euro Wood»

№	Indicator	Unit	Value
1	The cost of a complete technological complex of basic equipment (with a humidity more than 20%)	EUR	30000
2	Project work and approvals	EUR	2000
3	Cost of auxiliary equipment:		
3.1	A) motor transport - 3 trucks, converted to fuel liquefied gas	EUR	25500
3.2	B) loading and unloading mechanisms	EUR	8000
4	Total costs	EUR	65500
5	Payback for the project	year	1,00
6	The cost of production		

Table 3.4 (Continued)

№	Indicator	Unit	Value
6.1	Production costs, per ton of final product	UAH/t	2000
6.2	Pellet realization price	UAH/t	3000
6.3	Enterprise revenue	UAH/t	1000

Source: calculated by the author.

In case of project implementation it is worth making a forecast of the changes of PE «Euro Wood» financial results (Table 3.5). We calculated plan for 2019 owing to the linear extrapolation method and after that included all the changes in profit and losses in case of implementation new production.

Table 3.5

Forecast of financial results of PE «Euro Wood» in 2019-2021, ths. UAH

Indicator	2018 (fact)	2019 (plan)	Forecast	
			2020	2021
Net income from sales of products (goods, works, services)	4467.1	5455.03	5846.92	6406.76
Other operating income	83.7	104.63	121.75	136.95
Other income	0.1	0.13	0.18	0.19
Total income, thousand UAH	4550.9	5559.78	5968.84	6543.89
Cost of sales (goods, works, services)	2814.6	3445.25	3760.13	4209.97
Other operating expenses	452.8	548.43	563.43	578.43
Total cost, thousand UAH	3267.4	3993.68	4323.56	4788.39
Financial result before tax	1283.5	1566.10	1645.28	1755.50
Net profit (loss), thousan UAH	1283.5	1566.10	1645.28	1755.50

Source: estimated by the author.

According to the calculation, we identified that during the next 2 years PE «Euro Wood» could increase its profitability by the fuel pellets production.

In many countries, the pellet business is successfully operating or is at the formation stage. In the EU, US and Canada the development of the industry is almost developed. Even in Latin America, there are countries, that have completely switched to using alternative energy sources. Pellet production is successful in many countries, and the population is using white wood pellets widely for heating and water heating [32].

Many TPPs and CHPs burn low-quality gray pellets in large quantities, and woodworking and agricultural businesses economically compress waste and use heat and electricity, generated by their combustion for technological needs. About 50 thousand m³ of wood waste woodworking enterprises produces annually. This figure would be increased, if waste from sanitary felling of forests, parks, and specially grown energy wood were added here [33].

The benefits for PE «Euro Wood» in production of bio pellets are the following:

- the use of the raw material base, which was previously considered only waste, and which polluted the environment and required utilization;
- formation of new markets for final products realization (from energy and construction materials to domestic use for water heating and heating);
- creation of the newest unique ecological construction materials, production of valuable organic chemical products and fertilizers;
- displacement of traditional fossil fuels from the energy balance;
- high profitability of the enterprise, introducing the newly created technologies, high level of automation of technological processes, total certification of each batch of products and the production itself.

Those companies, that use outdated and inefficient technologies, that do not match the type of processed raw material and its physicochemical properties will not be able to compete in this market at all.

Among other benefits in such production we can note standard packaging (big-bags), convenient transportation, high duration of using without reducing consumer qualities and high bulk density (600-800 kg / m³). Fuel pellets slowly absorb moisture from the environment and do not freeze in winter. Numerous marketing studies have emphasized, that the wood fuel pellet business is not just a profitable, but also an environmentally friendly production [34].

Taking into account the peculiarities of pellet production, it is possible to achieve medium- and long-term goals of the enterprise, as well as to form an effective development strategy and managing it. It is important for the enterprise to attract consumers and to present such advantages for them [35]:

- Low risk of spontaneous combustion.
- The pellets are denser, than the wood and their humidity is lower, which provides more heat from burning the same volume as the wood.
- Due to the standard size and flowability, it is possible to automate the heating process to full extent.
- There is little waste in the most common types of pellets, which means, that the consumer will not need to clean the boiler every day. According to the reviews of those, who use this fuel, cleaning is required not more, than once a month.
- Only at first glance this fuel does not seem very affordable. In fact, if to recalculate the amount of thermal energy, then the pellets will be the most efficient fuel in this regard.
- Easy storage of raw materials - minimum area and no odor.
- Easy and clean transportation.

In conclusion, the process of implementation of the project is so complex and need some time and costs. First of all, it is important to find investors who will be interested in this project. In general, the production of the fuel pellets is so perspective direction which can lead PE «Euro Wood» to the success.

CONCLUSION TO THE PART 3

Currently, for the increasing of the product competitiveness and creating new comparative advantages, the enterprises should take measures for producing new goods or goods with a higher quality, and to develop and implement new strategies for expanding export operations on the world market of woodworking products.

The production of fuel pellets from waste wood is a good opportunity for PE «Euro Wood» to expand its assortment and attract new consumers. Bioenergy is the largest contributor of global renewables, simultaneously providing energy security to the environment and stimulates rural development. Pellets are a real alternative to coal, gas and oil. The cost of 1 kcal for firewood is 0.95 UAH and the cost of 1 kcal for burning pellets is 0.66 UAH. The technology for producing such products is quite new.

Consequently, Ukrainian entrepreneurs are so interested in this topic. The production of this product could be implemented by PE «Euro Wood».

The process of implementation consists of the several main steps. At the first stage, it is important for PE «Euro Wood» to find a raw material base that has a sufficient amount of dry (up to 20% moisture) carpentry chips or sawdust as a by-product of basic production with a sufficiently deep processing tree. The second step is transportation basis. The dump truck can unload the wood materials directly on a special receiving device at the enterprise

The third stage is new technology implementation. Technological pelletizing complex of a container type with a press of 110 kW (possibly up to 200 kW) is the modern model of pellet complexes which is noteworthy for PE «Euro Wood». Delivery time of the equipment for PE «Euro Wood» is 18 weeks.

Due to the evaluation of the proposed measures effectiveness, we estimated the realization costs and profitability of the project. Net profit of PE «Euro Wood» in 2020 will reach the amount of 1645.28 ths. UAH, in 2021 - 1755.50 ths. UAH.

Pellet production is successful in many countries, and the population is using white wood pellets widely for heating and water heating. Among the benefits for PE «Euro Wood» in production of bio pellets are: the use of the raw material base, which was previously considered only waste, formation of new markets for final products realization, creation of the newest unique ecological construction materials, production of valuable organic chemical products and fertilizers, displacement of traditional fossil fuels from the energy balance, high profitability of the enterprise, introducing the newly created technologies, high level of automation of technological processes etc. This kind of fuel is deservedly called environmentally friendly. It is important for the enterprise to attract consumers and to present such advantages for them: affordability of the fuel, efficiency, easy storage – minimum area and no odor, easy transportation, more heat from burning.

CONCLUSIONS AND PROPOSALS

The intensification of competition is a feature of current economic environment, both in Ukraine, and all over the world. Increased competition in most sectors of Ukraine's economy, accelerated political and social changes stipulates the necessity of stable market positions of the enterprises. In these conditions, the companies need to carry out market research, analysis of the state and activity of the company and on this basis, make strategic decisions on the implementation of new measures aimed at ensuring strong competitive positions. The issue of international competitiveness and competitive advantages is very relevant for those enterprises whose sphere of commercial and industrial activity extends to foreign countries.

The world market of woodworking products consists of a wide range of goods and materials. The most exported and imported during 2014-2018 were the wood products, as industrial roundwood, sawnwood, paper and paperboard goods, recovered paper and wood-based pannels. The main exporters and importers of the wood products during 2014-2018 were New Zealand, Austria, Sweden, Canada, Russia, Germany, Finland and China. Ukraine is not in the top of the main exporters, but has a great potential to be among them because of a great forestry area.

Since 2008, the Ukrainian wood industry has shown significant competitive advantages in the global woodworking market. Competitive advantages for Ukrainian producers are mostly rich natural resources and cheap skilled labor. It attracts investors, who show considerable interest in the production of wood panels and furniture in Ukraine and in starting new businesses. At the beginning of 2016, Ukrainian timber products were more than twice as competitive as RCA world average (2.14), it is also ahead of this indicator of such powerful world exporters as China (0.67), United States of America (1.20), Germany (1.11), Russian Federation (1.38), Malaysia (0.89) and slightly inferior to Poland (2.19).

PE «Euro Wood» is an example of a successful woodworking enterprise in Ukraine, which confirms its activity by positive indicators in the structure and dynamics of assets, liabilities and financial results. Ratios of liquidity, solvency, business activity, profitability have positive dynamics, but the main assets need to be renewed.

Among the strengths of PE «Euro Wood» are: favorable economic and socio-economic situation for entering new markets and interest of investors in development of the wood industry.

According to the research of the geographical and commodity structure, we identified the main importers of PE «Euro Wood» products. Among the importers are Poland, Hungary and Romania. During the last years Moldova strengthens its positions in PE «Euro Wood» import. Among the exported products by PE «Euro Wood» are pallet blanks, edge boards, wooden bars and wooden pallets. One of the competitive advantages of PE «Euro Wood» is using of advanced technologies for processing of the raw materials. An equipment of the enterprise allows to produce the goods according to the individual drawings of customers taking into consideration all their needs. The enterprise provide continuous technological quality control at all stages of the production from the harvesting of wood to packaging before shipping to the customer. Due to the agreement, the company can provide pre-production of pallets, storage of pallets in its warehouses or delivery of pallets to the customer by the transport of the enterprise. Worth mentioning, that PE «Euro Wood» produces the pallet blanks both in the form of individual elements of pallets and as a complete set for independent assembly of a pallet by the customer. Another competitive advantage of the enterprise is, that for the production of rounded logs PE «Euro Wood» uses pine of 1st grade. Each batch of the forest is checked for the presence of radioactive particles, and the enterprise can confidently declare that its products are environmentally friendly and safe.

The calculation of export efficiency and identifying of the mark-up on goods show, that the enterprise has positive indicators of export efficiency and can make it prices even lower. It provides the opportunity for the enterprise to enter new markets abroad.

Perspective direction for development of PE «Euro Wood» assortment is the production of the fuel pellets. The production of fuel pellets from waste wood is a good opportunity for PE «Euro Wood» to expand its assortment and attract new consumers. Bioenergy is the largest contributor of global renewables, simultaneously providing energy security to the environment and stimulates rural development. Pellets are a real

alternative to coal, gas and oil. The technology for producing such products is quite new. Consequently, Ukrainian entrepreneurs are interested in developing of this area. The production of this product could be implemented by PE «Euro Wood». There is a considerable amount of industrial waste in the territory of Ukraine, from which it is possible to obtain relatively cheap fuel. The process of implementation consists of the several main components: raw materials, delivery/ transportation and technologies. In the final qualifying paper we represented the main costs and profitability of the project, the process of production and volumes of production. Pellet production is successful in many countries, and the population is using white wood pellets widely for heating and water heating. Among the benefits for PE «Euro Wood» in production of bio pellets are the use of the raw material base, which was previously considered only waste, formation of new markets for finished products realization, creation of the newest unique ecological construction materials, production of valuable organic chemical products and fertilizers, displacement of traditional fossil fuels from the energy balance, high profitability of the enterprise, introducing the newly created technologies, high level of automation of technological processes etc. This kind of fuel is deservedly called environmentally friendly. It is important for the enterprise to attract consumers and to present such advantages for them as affordability of the fuel, efficiency, easy storage – minimum area and no odor, easy transportation, more heat from burning. Taking into account the peculiarities of pellet production, the company will be able to achieve medium- and long-term goals of the enterprise, as well as to form an effective development strategy and managing it.

Due to the evaluation of the proposed measures effectiveness, we estimated the realization costs and profitability of the project. Net profit of PE «Euro Wood» in 2020 will reach the amount of 1645.28 ths. UAH, in 2021 - 1755.50 ths. UAH. Taking into account mentioned above, PE «Euro Wood» is a perspective enterprise which has a great potential for growing and developing in future on the basis of its competitive advantages.

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APPENDICES

Appendix A

Table A.1

Consolidated statement of financial position of PE «Euro Wood»

Assets	Line	31.12.2014	31.12.2015	31.12.2016	31.12.2017	31.12.2018
	2	3	4	5	6	7
I. Non-current assets						
Incomplete capital investment	1005	8.5	7.9	0	0	0
Fixed assets	1010	176.8	150.1	121.6	81.4	42.1
initial value	1011	185.1	195.5	205.9	205.9	205.9
amortization	1012	-8.3	-45.4	-83.4	-124.5	-163.8
Long-term biological assets	1020	0	0	0	0	0
Long-term financial investments	1030	0	0	0	0	0
Other non-current assets	1090	0	0	0	0	0
Total Section I		185.3	158	121.6	81.4	42.1
II. Current assets						
Stocks	1100	37.6	2.2	28.7	6.2	243.6
including finished products	1103	0.5	0	0	0	0
Current biological assets	1110	0	0	0	0	0
Accounts receivable for goods, works, services	1125	17.2	53.1	17.2	286.3	857.8
Accounts receivable for the budget	1135	0.2	0.3	0.3	59.3	293.4
including income tax	1136	0.2	0.2	0.2	0.2	0.2
Other current receivables	1155	42.5	240	516.2	621.6	366.6

Table A.1 (Continued)

Assets	Line	31.12.2014	31.12.2015	31.12.2016	31.12.2017	31.12.2018
	2	3	4	5	6	7
II. Current assets						
Current financial investments	1160	0	0	0	0	0
Money and their equivalents	1165	42.7	210.8	45.2	49	337.5
Expenses of future periods	1170	0	0	0	0	0
Other current assets	1190	0	0	0	3.7	15.7
Total Section II		140.2	506.4	607.6	1026.1	2114.6
III. Non-current assets held for sale and disposal groups	1200	0	0	0	0	0
Balance	1300	325.5	664.4	729.2	1107.5	2156.7
Liabilities						
I. Equity						
Registered capital	1400	0.5	0.5	0.5	0.5	0
Additional capital	1410	0	0	0	0	0
Reserve capital	1415	0	0	0	0	0
Undistributed profit	1420	158.4	475	441.3	432	1521
Unpaid capital	1425	0	0	0	0	0.5
Total Section I		158.9	475.5	441.8	432.5	1521.5
II. Long-term liabilities, targeted financing and provision	1595	0	0	0	0	0
III. Current liabilities						

Table A.1 (Continued)

Liabilities	Line	31.12.2014	31.12.2015	31.12.2016	31.12.2017	31.12.2018
	2	3	4	5	6	7
III. Current liabilities						
Short-term bank credits	1600	0	0	0	0	0
Current accounts payable for long-term liabilities	1610	0	0	0	0	0
goods, works, services	1615	145.2	142.6	162.3	164.2	243.6
settlements with budgets	1620	9.7	14	4.6	22.2	43.4
including income tax	1621	0	0	0	0	0
insurance calculations	1625	1.9	1.3	3.6	2.1	11.4
payroll calculations	1630	2.2	2	7	1.1	27.7
Deffered income	1665	0	0	0	0	0
Other current liabilities	1690	7.6	29	109.9	485.4	309
Total Section III		166.6	188.9	287.4	675	635.2
IV. Obligations related to non-current assets held for sale and disposal groups	1700	-	0	0	0	0
Balance	1900	325.5	664.4	729.2	1107.5	2156.7

Table A.2

Consolidated statement of financial results

Article	Line	2014	2015	2016	2017	2018
	2	3	4	5	6	7
Net income from sales of products (goods, works, services)	2000	515.4	1064.7	779.4	1544.3	4467.1
Other operating income	2120	0	0	0	744.8	83.7
Other income	2240	0	1.2	8.9	0.1	0.1
Total income	2280	515.4	1065.9	788.3	2289.2	4550.9
Cost of sales (goods, works, services)	2050	-292	-602.2	-210.3	-1393.9	-2814.6
Other operating expenses	2180	70.3	-104.1	-236.6	-841.6	-452.8
Other expenses	2270	0	0	0	0	0
Total expenses	2285	-362.3	706.3	446.9	-2235.5	-3267.4
Financial result before tax	2290	153.1	359.6	341.4	53.7	1283.5
Income tax	2300	0	0	0	0	0
Net profit (loss)	2350	153.1	359.6	341.4	53.7	1283.5



Price List

Wooden pallets

Wooden pallets 1000 * 1200 mm - 80 UAH / pc



Wooden bars

natural humidity - 3800 UAH. m³ / export 130 € m³

up to 20% humidity through drying - UAH. m³ / export 150 € m³



Edge boards

natural humidity - 3800 UAH. m³ / export 130 € m³

up to 20% humidity through drying - UAH. m³ / export 150 € m³



Unedge boards

Price is negotiable



Wooden rail

natural humidity - 3800 UAH. m³ / export 130 € m³

up to 20% humidity through drying - UAH m³ / export 150 € m³



Floor board

pine - 200 UAH. m² / export 10 € m²

oak - 600 UAH. m² / export 25 € m²

ash - 600 UAH. m² / export 25 € m²



Roundwood (pine)

Ø 140 mm - 4115 UAH. m³ / export 130 € m³

Ø 160 mm - 4115 UAH. m³ / export 130 € m³

Ø 180 mm - 4115 UAH. m³ / export 130 € m³

Ø 200 mm - 4115 UAH. m³ / export 130 € m³

Ø 220 mm - 4115 UAH. m³ / export 130 € m³

Roundwood (fir-tree)

Ø 140 mm - 4115 UAH. m³ / export 130 € m³

Ø 160 mm - 4115 UAH. m³ / export 130 € m³

Ø 180 mm - 4115 UAH. m³ / export 130 € m³

Ø 200 mm - 4115 UAH. m³ / export 130 € m³

Ø 220 mm - 4115 UAH. m³ / export 130 € m³



Rounded log

pine - 1200 UAH. m² / export 50 € m²

fir tree 1 grade - 1200 UAH. m² / export 50 € m²

spruce - 1200 UAH. m² / for export 50 € m²

alder - 120 UAH. m² / export 6 € m²

linden - 200 UAH. m² / export 10 € m²

ash - 400 UAH. m² / export 20 € m²

oak - 400 UAH. m² / export 20 € m²



Blockhouse

100mm - 200 UAH. m² / export 10 € m²

130mm - 250 UAH. m² / export 10 € m²



Pallet blanks

natural humidity for export - 3200 UAH m³ / for export 120 € m³

up to 20% moisture through drying for export - 140 € m³



Firewood chipped

soft breed 1 compositionometer - 500 UAH.

solid rock 1 warehouse meter - 1000 UAH. / On export 42 €

ABSTRACT

Zakharchuk Tetiana Volodymyrivna

Competitive advantages of the enterprise on the world market of woodworking products

Final qualifying work for the degree of Master of speciality 051 "Economics", specialization "International economics." Kyiv National University of Trade and Economics, 2019.

In the final qualifying paper the world market of woodworking products and financial and economic activity of PE «Euro Wood» have been analyzed; environmental monitoring of the competitiveness and competitive advantages of PE «Euro Wood» in the foreign market is conducted and evaluated; the reserves of increasing the competitive advantages of PE «Euro Wood» on the world market are identified, the complex of measures for strengthening the competitive advantages of PE «Euro Wood» is proposed. The forecast evaluation of the effectiveness of the proposed measures in the medium term is represented.

Keywords: competitiveness, competitive advantage, competitive factors, the international competitiveness management.

АНОТАЦІЯ

Захарчук Тетяна Володимирівна

Конкурентні переваги підприємства на світовому ринку деревообробної продукції

Випускна кваліфікаційна робота на здобуття ступеня магістра за спеціальністю 051 «Економіка», спеціалізацією «Міжнародна економіка». Київський національний торговельно-економічний університет, 2019.

У випускній кваліфікаційній роботі проаналізовано світовий ринок деревообробної продукції та показники фінансово-господарської діяльності ПП «Євро Вуд», проведено моніторинг зовнішнього середовища та оцінку конкурентних переваг ПП «Євро Вуд» на зовнішньому ринку; визначено резерви посилення конкурентних переваг ПП «Євро Вуд» на світовому ринку та запропоновано комплекс заходів у частині посилення конкурентних переваг ПП «Євро Вуд». Здійснено прогностичну оцінку ефективності запропонованих заходів на середньострокову перспективу.

Ключові слова : конкурентоспроможність, конкурентна перевага, фактори конкурентоспроможності, управління міжнародною конкурентоспроможністю.

**Kyiv National University of Trade and Economics
The Department of World Economy**

**SUMMARY
TO THE FINAL QUALIFYING PAPER (PROJECT)**

on the topic:

“Competitive Advantages of the Enterprise on the World Market of Woodworking Products”

(based on data of PE "Euro Wood", Birky, Chernihiv region)

Student of the 2nd year, group 2a,
speciality 051 “Economics”
specialization “International
economics”

Zakharchuk Tetiana

Scientific adviser
Candidate of Sciences (Economics),
Associate Professor

Pugachevska K.S.

Kyiv, 2019

The final qualifying paper consists of an introduction, three parts, conclusions and references. The research materials are presented on 50 sheets, in 21 tables, in 4 figures and in 2 appendices. References consist of 44 sources.

The object of the final qualifying paper is the process of identifying the competitive advantages of the company's products on the woodworking market.

The subject of the research is theoretical and practical aspects of identifying the competitive advantages of the enterprise's products on the woodworking market.

The purpose of the final qualifying paper is to study the system of managing the competitive advantages of the enterprise on the world woodworking market and to propose ways of increasing competitiveness of PE «Euro Wood» in the world woodworking market.

The research is based on the methods of analysis and synthesis, statistical observation, absolute and relative variables, methods of comparison, abstraction, analogy, calculation. In accordance with the tasks set in the final qualifying paper, methods of research of processes are also used in the evaluation of the international and financial and economic activity of the enterprise.

The introduction reflects the relevance and level of research of the topic. It also identifies the purpose, objectives, object and subject of the study; the research methods; information base and work structure,

In the first part “RESEARCH OF THE MODERN STATE OF PE “EURO WOOD” DEVELOPMENT” the author researched the current state of PE «Euro Wood», in particular, analyzed the world market of the woodworking industry and evaluated the financial and economic activity of PE «Euro Wood».

In the second part “ASSESSMENT OF THE COMPETITIVE ADVANTAGES OF PE “EURO WOOD” ON THE WORLD MARKET OF THE WOODWORKING PRODUCTS” the author assessed the level of competitiveness and identified competitive advantages of PE «Euro Wood» on the world woodworking market, estimated the internal and external environment of PE «Euro Wood», as well as geographical and commodity structure of PE «Euro Wood» export activity.

In the third part “WAYS OF ENHANCING THE COMPETITIVE ADVANTAGES OF PE “EURO WOOD” ON THE WORLD MARKET OF WOODWORKING PRODUCTS” the author proposed measures to enhance the competitiveness of PE «Euro Wood» on the world woodworking market, in particular, presented a set of measures to improve competitiveness and provided a forecast of the effectiveness of the proposed measures.

The conclusions and proposals contain the general results of the analysis of the object of study and specify the directions of increasing the competitiveness and creating competitive advantages of PE «Euro Wood» on the world market of the woodworking products in order to increase its attractiveness.