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**MACEDONIAN WOOD INDUSTRY IN  
PANDEMIC CONDITIONS**

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**ABSTRACT**

Dealing with the pandemic caused by spread of Covid-19 virus is a challenge, but also a risk for many companies around the world, our country inclusive. The purpose of this research is to give an overview of the current situation regarding operation of the companies from wood industry sector. The situation with wood industry is presented through some indicators such as: number of active business entities, number of employees, industrial production and turnover, as well as foreign trade. The analysis shows that the situation with production in the two major activities in wood industry sector - manufacture of wood and wood products, and furniture production - according to almost all indicators, has a negative trend, as a result of the new economic crisis caused by the pandemic. However, the analysis of the situation in conditions of pandemic, apart from the disadvantages, can open space for new opportunities and resolve issues imposed in the wood industry sector.

**Keywords:** conditions, indicators, timber industry, pandemic.

**1. INTRODUCTION**

Our country and the whole world are facing a health crisis caused by the corona - a virus called Covid - 19. This phenomenon - which has primarily health and sanitary implications - due to its spread throughout the entire planet, inevitably caused other than health consequences.

One of the main negative global side effects was in fact the economic crisis, which occurred in our country and worldwide. The economic crisis began with strong and oscillating changes in global markets, an economic downturn in production and closure of borders between countries, all of which directly affected the labor market and jobs. Dealing with the economic challenges, labor market imbalances, preserving small and medium-sized companies as well as the self-employed - these are the main challenges facing our nation and society as a whole.

The pandemic that is still going on and the consequences of which will be felt long after its end, has imposed the need to take a series of activities and measures that will ensure companies maintain a competitive position in the market. Wood industry sector has not been unaffected by the changing living and working conditions during the pandemic. On the contrary, it was and still is being considered as the driving force for stabilization and recovery of Macedonian economy. That is why planning and investments in this sector deserve a lot of attention. The analysis of the corona-virus crisis, in addition to the great drawbacks, can open space for new opportunities and address the burning issues in this sector. Retaining a skilled workforce, greater engagement of domestic wood industry companies, application of visual techniques in the area of promotional activities, these are some of the activities to maintain the continuity of business operations in this sector.

Wood industry in our country, i.e. wood processing and furniture production, should be economically successful and profitable activities, with balanced competitive and sustainable

development, following the world development trends and challenges in conditions of the pandemic and in its aftermath.

## 2. SUBJECT AND PURPOSE OF THE RESEARCH

Subject of the research is current indicators of the situation in wood industry in the country. The following were analyzed: number of business entities, industrial production and turnover, as well as foreign trade. The analyses were made on the data obtained from the MAKSTAT database at the State Statistical Office of the Republic of North Macedonia, for the period 2017-2021.

The purpose of the research is to perceive the tendencies in production and trade, active business entities and trade, both in manufacture of wood and wood products as well as in production of furniture, and thus to determine the condition of these productions in conditions before and in the pandemic.

## 3. SOME INDICATORS OF THE SITUATION IN WOOD INDUSTRY

The situation in wood industry of the country is determined through the following indicators: the number of active business entities, trends in industrial production and trade, as well as foreign trade. The data that are subject of our research will be analyzed separately by activities, both for production of wood and wood products, as well as for production of furniture and wood industry in total for the period 2017 - 2021.

### 3.1 Active business entities in wood industry

The number of active business entities is given in Table 1. The total number of business entities in manufacturing is shown, as well as the share of business entities in wood industry, and separately by activities. The period 2017 - 2020 is analyzed.

*Table 1. Number of active business entities*

Year	2017	2018	2019	2020	Average	AAR
<b>Manufacturing</b>	7885	8033	8362	8011	<b>8073</b>	<b>0,5</b>
<b>Wood industry (total)</b>	1125	1171	1220	1205	<b>1180</b>	<b>2,3</b>
<b>Manufacture of wood and wood products</b>	438	462	458	439	<b>449</b>	<b>0,1</b>
<b>Furniture production</b>	687	709	762	766	<b>731</b>	<b>3,7</b>

On the territory of our country, for the period 2017 - 2020, on average, 1180 business entities from wood industry were registered. The number of business entities from wood production and wood products is on average 449, and in furniture production the number is higher (731) in the period analyzed. The share of business entities from wood industry in the number of business entities from manufacturing is about 15% on average for the given period.

The number of business entities in wood industry tends to increase, as well as in manufacture of wood and wood products and production of furniture. This trend is followed by the number of business entities, i.e. companies from processing industry for the analyzed period. In 2020, when the pandemic started, we had a decline in the number of business entities, in total in wood industry and in manufacturing. Only in production of furniture the number of business entities increased for the above mentioned year.

### 3.2 Employees in wood industry

The data on the number of employees for the period 2016 - 2019 refer to processing industry, in total for wood industry, and separately by activities. They are shown in Table 2.

**Table 2. Number of employees in wood industry**

Year	Manufacturing	Wood industry	Manufacture of wood and wood products	Furniture production
2016	111402	6270	1992	4278
2017	115614	6365	1935	4430
2018	124359	7046	2242	4804
2019	134863	7453	2325	5128
<b>Average</b>	<b>121560</b>	<b>6784</b>	<b>2124</b>	<b>4660</b>
<b>AAR</b>	<b>6,5</b>	<b>5,9</b>	<b>5,3</b>	<b>6,2</b>

The number of employees in manufacturing increases from 111402 to 134863 employees, i.e. an average annual increment rate of 6.5% for the period analyzed. From the data shown in Table 2, it can be seen that the number of employees in wood industry also tends to increase. Thus, from 6270 employees in 2016, this number in 2019 rises to 7453 workers, or has an average annual growth rate of 5.9%. In manufacture of wood and wood products, the number of employees is also growing, with the average increment rate for the whole period having a positive sign and being 5.3%. The number of employees in production of furniture tends to increase with an average rate of 6.2% in the given period.

The average share of the number of employees from wood industry in manufacturing is about 6% for the period 2016-2019. The analysis of the number of employees refers to the situation of this indicator in the period before the pandemic. The data show an increase in employees in both processing and wood industry.

### 3.3 Production and turnover in wood industry

Production is an expression of the produced use values that meet certain needs of consumers. The volume of production has a strong impact on the economy of wood industry. The costs per unit of product depend a lot on the volume of production and its relation to the capacity of the wood-industrial enterprise, i.e. the quality of the economy of the wood-industrial enterprise.

Production analysis is presented through the chain indices of industrial production on an annual basis. The data refer to manufacturing, manufacture of wood and wood products and production of furniture, for the period 2017-2020.

The data in Table 3 show that industrial production in manufacturing has some variations. The most was produced in 2018 compared to 2017, with chain index of 106.45%. In this sector there is reduced production in 2020, by about 10%, compared to the previous year.

**Table 3. Chain indices of industrial production, by years**

Year	Manufacturing	Manufacture of wood and wood products	Furniture production
2017	99,78	68,30	100,87
2018	106,45	102,18	126,42
2019	102,44	82,50	100,50
2020	90,60	98,69	86,95

Processing of wood and wood products in relation to the chain indices of industrial production has uneven dynamics. This production also decreased in 2020 by about 1.5%, compared to 2019

In production of furniture, variations of the chain indices are noticed throughout the period. In 2017 and 2019 we have almost the same realized production compared to the previous year, while for 2020 there is a characteristic drop in industrial production by about 13% compared to the year before the pandemic.

The value of turnover is the market value that the reporting unit, namely the enterprise, achieved based on the sale of goods and services in the reporting year. The turnover indices in the

industry are analyzed, for manufacturing, for manufacture of wood and wood products and for production of furniture for the period 2017-2020.

**Table 4.** Indices of turnover in industry on average 2015, in total, by years

Year	Manufacturing	Manufacture of wood and wood products	Furniture production
2017	115,1	96,6	104,6
2018	129,3	106,7	111,5
2019	137,3	97,5	114,4
2020	127,0	85,2	103,0

The total turnover in manufacturing shows a rising trend for the given period, with the exception of 2020 when sales decline by 10% compared to 2019. The turnover of manufacture of wood and wood products companies is characterized by variable dynamics in the analyzed period compared to 2015. At the beginning of the pandemic (2020) in this activity too there is a decline in turnover by about 15%. The analysis of the turnover of the companies for furniture production in the period 2017 - 2020 shows a tendency of increasing the turnover for all the years excluding 2020, when it declines by about 11% compared to 2019.

### 3.4 Foreign trade in wood industry

Foreign trade is an area of total trade turnover, which is carried out between companies from our country with economic entities from foreign countries, and covers the import and export of goods. Imports and exports are interdependent flows; they are very complex activities which require knowledge of international economic relations, payment instruments in international trade, the respective country's foreign exchange and customs system, the economic policy pursued by individual countries, the state of the world market. etc.

Commodity exchange of wood industrial products will be analyzed according to the Classification of Products by Activity (CPA). The analysis refers to the activities, manufacture of wood and wood products and furniture production, and the total wood industry for the period 2017 - 2021. The last 2021 refers to the period from January to October of that year.

The import of wood industrial products by activities, and in total for wood industry, according to the CPA, for the period 2017 - 2021 is shown in Table 5.

**Table 5.** Import of wood industrial products, according to CPA, (in 000 EUR)

Year	Wood industry		Wood and wood products		Furniture	
	Value	(%)	Value	(%)	Value	(%)
2017	135090	100,0	77424	57,3	57666	42,7
2018	144119	100,0	81009	56,2	63110	43,8
2019	161907	100,0	83039	51,3	78868	48,7
2020	165015	100,0	85511	52,0	79504	48,0
2021M01-M10	159727	100,0	77815	48,7	81912	41,3
<b>Average</b>	<b>153172</b>	<b>100,0</b>	<b>80960</b>	<b>55,1</b>	<b>72212</b>	<b>44,9</b>
<b>AAR</b>	<b>4,3</b>		<b>0,1</b>		<b>9,2</b>	

From the data in the table above it can be seen that the import of products in wood processing and wood products has a tendency to grow with an average growth rate of 0.1%. The average value of imports, for the total period, is 80960000 EUR. Furniture imports also tend to increase on average per year with a higher rise rate of 9.2%. The average import for the whole period is 72212000 EUR. The tendency of continuous increase in import was followed by the total import of wood industrial

products with an average rate of 4.3% in the analyzed period. The average for the period 2017 - 2021 of total import is 153172000 EUR.

In the period of pandemic 2020-2021, imports recorded a positive trend, overall at the level of wood industry, as well as by activities.

The export of wood industrial products by activities, and in total for wood industry, according to the CPA, for the period 2017 - 2021 is shown in Table 7.

**Table 6. Export of wood industrial products, according to CPA (in 000 EUR)**

Year	Wood industry		Wood and wood products		Furniture	
	Value	(%)	Value	(%)	Value	(%)
2017	185495	100,0	6866	3,7	178629	96,3
2018	225266	100,0	8386	3,7	216880	96,3
2019	258205	100,0	10286	4,0	247919	96,0
2020	223661	100,0	6591	3,0	217070	97,0
2021M01-M10	199487	100,0	5965	3,0	193522	97,0
<b>Average</b>	<b>218423</b>	<b>100,0</b>	<b>7619</b>	<b>3,5</b>	<b>210804</b>	<b>96,5</b>
<b>AAR</b>	<b>1,8</b>		<b>-3,5</b>		<b>2,0</b>	

The activity of processing wood and wood products is characterized by variable exports for the analyzed period (Table 6). In addition to the variable dynamics of exports, its downward trend for the total period can be noted, with an average annual drop rate of -3.5%. The average value of exports in this activity is 7619000 EUR. Exports of furniture, on the other hand, have increasing dynamics in the period 2017 - 2021, with an average annual increment rate of 2.0%. The average value of exports of furniture for that period is 210804000 EUR.

As a result of export dynamics in both productions, the total export of wood industrial products in the studied period tends to increase, with an average annual growth rate of 1.8% and averages 218423000 EUR.

The average percentage share of export of wood products in the total export of wood industrial products, for the analyzed period, is only 3.5%, while the share of the export of furniture participates with high 96.5%.

In the period of the pandemic 2020-2021, the export of products decreased, overall at the level of wood industry, as well as by activities.

Based on the analyzed data on exports and imports of products in total for wood industry for the period 2017-2021, a balance has been made. The balance is shown in Table 7.

**Table 7. Balance and coverage of imports with exports in wood industry**

Year	In 000 EUR			Coverage of imports with export (%)
	Export	Import	Balance	
2017	185495	135090	50405	137
2018	225266	144119	81147	156
2019	258205	161907	96298	160
2020	223661	165015	58646	134
2021M01-M10	199487	159727	39760	125

As a result of the export and import data in the individual activities of wood industry, the total balance of wood industry is positive for all years of the analyzed period. In the last two years of the given period, more precisely in 2020 and 2021 (January - October), the balance has a positive but reduced trend compared to the previous years, as a result of the conditions caused by the pandemic.

#### **4. DISCUSSION AND CONCLUSIONS**

The condition in wood industry in our country is analyzed through the number of active business entities, number of employees, industrial production and trade of goods and services, as well as the export and import of wood industrial products. The period analyzed was 2017 - 2021.

The share of business entities in wood industry in the number of business entities in manufacturing is about 15% on average for the period 2017-2020. The number of business entities tends to increase in wood industry, as well as in manufacture of wood and wood products and production of furniture. This trend is followed by the number of business entities, i.e. manufacturing companies.

In 2020, when the ongoing pandemic started, there could be a decline in the number of business entities, in total in wood industry and manufacturing. Only furniture companies recorded an increase in numbers for the year quoted.

The analysis of the number of employees refers to the situation in this indicator in the period preceding the pandemic. The average share of the number of employees in wood industry in the total number of employees in manufacturing is about 6% for the period 2017-2019. The average number of employees in wood industry has a tendency of growth with an average annual rate of 5.9%. The upward trend is followed by the number of employees in production of furniture, where the average growth rate is 6.2% and the number of employees in manufacture of wood and wood products with an average rate of 5.3% for the analyzed period.

Industrial production in wood industry, as well as in manufacturing has uneven dynamics. In manufacture of wood and wood products the production has decreased in 2020 compared to 2019 by about 1.5%. For the same year, there was a decline in furniture production by 13% compared to the year before the pandemic.

The beginning of the pandemic (2020) has an impact on the realized turnover, both in the activity of wood processing and wood products, with a decrease by 12%, and in production of furniture by about 11% compared to 2019.

The realized import in processing of wood and wood products, for the period 2017 - 2021, grows on average annually with a rate of 0.1%. Imports in production of furniture increased with a higher growth rate of 9.2%. Based on the tendencies of the import of both products, the total import of wood industrial products has an increase with an average rate of 4.3% for the given period.

In the period of the pandemic (2020-2021) imports increased, overall at the level of the wood industry, as well as by activities.

The export of manufacture of wood and wood products, for the period 2017 - 2021 is characterized by an average decline rate of -3.5%. The export of products in production of furniture, for the same period, has an average growth rate of 2.0%. The movement of exports in the individual production activities conditions the total export of wood industrial products; in that period it tends to increase on average at a rate of 1.8% annually.

In the period 2020-2021, the export of products has decreased, in total at the level of wood industry, as well as by activities.

The total balance of wood industry production has a positive sign for all years of the analyzed period. In the last two years of the given period, namely 2020 and 2021 (January-October), the balance has a positive but reduced trend compared to the previous years, which indicates the fact that the pandemic had an impact on trade in wood products.

The economic crisis caused by the corona virus, Covid - 19, is seen to have a negative effect on the activities in wood industry, as well as on the overall economy of the country.

Numerous and unforeseen changes also affected the way of working, working hours, employee relations, social interaction, working from home, as well as many other key changes that had a significant impact on their motivation to work. It was important for companies to show that they care about the health of their employees, that their health is top priority, and to use appropriate techniques and strategies to keep their employees healthy and safe on the one hand, and motivated on the other hand.

In such specific conditions, businesses face daily difficulties in their operations, such as: reduced market volume, problems and obstacles in delivery of products and services, interruptions due to implementation of state measures to deal with the pandemic, lack of raw materials for production,

etc. Unfortunately, in this situation that has been lasting for more than a year, many businesses will not be able to cope with the crisis and will be forced to significantly reduce their workload or close their business completely.

Future policies and measures should go in the direction of getting ready to welcome new dramatic changes in the labor market, economic oscillations and new legal solutions. Within Macedonia, our economy, which is relatively small and fragile, needs to prepare for increased unemployment in the period ahead, new working methods and new forms of human resources management. As a small economy we have an advantage, and that is that the intensive tectonic economic earthquakes so far, and from now on, partially bypass us, but the problem is that we persistently in recent years do not have the courage and virtue to build economic relations that are tailored to human and for our common good. Unfortunately, this is also shown by this economic crisis, which we are managing confused and with delays in taking measures and activities to deal with the pandemic.

The long-awaited end of the pandemic is increasingly promising that many of these changes that companies have made so far will remain. Recognizing the opportunities during the pandemic, some companies will remain as permanent opportunities for survival and prosperity in the future.

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