

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/348791657>

Activity of enterprises in the wood-based sector under conditions of economic uncertainty

Article in *Annals of WULS Forestry and Wood Technology* · September 2020

DOI: 10.5604/01.3001.0014.6936

CITATIONS

0

READS

14

3 authors:



Elżbieta Mikołajczak

Poznań University of Life Sciences

13 PUBLICATIONS 18 CITATIONS

[SEE PROFILE](#)



Marek Wieruszewski

Poznań University of Life Sciences

20 PUBLICATIONS 35 CITATIONS

[SEE PROFILE](#)



Leszek Wanat

Poznań University of Life Sciences, Poznań University of Economics and Business

24 PUBLICATIONS 78 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Leadership in the Knowledge-Based Economy [View project](#)



The predefined project: "Creating capacity for collaboration between units of local authorities and sectors as a tool for local and regional development" [View project](#)

Activity of enterprises in the wood-based sector under conditions of economic uncertainty

ELŻBIETA MIKOŁAJCZAK¹, MAREK WIERUSZEWSKI², LESZEK WANAT³

¹Department of Law and Enterprise Management in Agribusiness, Poznan University of Life Sciences

²Department of Wood-Based Materials, Faculty of Wood Technology, Poznan University of Life Sciences

³Faculty of Information Technology and Visual Communication, Collegium Da Vinci in Poznan

Abstract: *Activity of enterprises in the wood-based sector under conditions of economic uncertainty.* The state of the epidemic in Poland and the resulting restrictions caused serious disturbances in the economy. Entrepreneurs, conducting business in conditions of economic uncertainty and the threat of a crisis, are looking for various support tools, including adequate government programs. The study attempts to identify and evaluate selected anti-crisis tools, dedicated and possible to be used in the wood-based sector in Poland. The impact of these tools on economic activity was assessed by entrepreneurs, with particular emphasis on the opinions of manufacturers of wooden and cork products, producers of paper and paper products and furniture manufacturers, categorizing industry specializations in accordance with the Polish Classification of Activities. In the comparative analysis, selected economic indicators were used, based on secondary data of public statistics, according to the assessment of the current economic situation and its forecast expressed in the opinion of entrepreneurs. As a result, it was found that despite the ongoing epidemic, entrepreneurs in the wood-based sector relatively often use government support tools, showing moderate optimism under the conditions of economic uncertainty.

Keywords: wood-based companies, economic uncertainty, anti-crisis measures, government programs, pandemic

INTRODUCTION

The imposition of the state of the epidemic caused a completely new economic and social situation in Poland and in the world, affecting all spheres of life and activity. Entrepreneurs, both natural persons conducting business activity and legal persons, must adapt to the conditions of economic uncertainty. This also applies to the wood-based sector, whose share in the production of Polish GDP is over 2.5%. According to industry data from the official statistics in the area of forestry, in 2018, over 450,000 people were employed in almost 90,000 enterprises in this sector (Statistical Yearbook of Forestry). The data for individual branches of forestry and wood-based production¹ are summarized in Table 1.

Table 1. Number of entities and number of paid employees in wood-based sector in 2018

Divisions of the Polish Classification of Activities listed for enterprises in the wood-based sector	Number of entities	Number of paid employees
Forestry and logging	18 455	55 304
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	34 581	132 701
Manufacture of paper and paper products	5 319	67 068
Manufacture of furniture	30 945	198 515

Source: own elaboration based on (Statistical Yearbook of Forestry, 2019, p. 208)

¹ Other entrepreneurs are also directly related to the wood industry: transport companies, manufacturers of machines and devices for wood processing, varnish producers, suppliers of accessories necessary for the production of furniture, distributors, traders and others (not included in Table 1).

In this perspective, wood industry enterprises, which are fighting not only for development but also for survival in an unstable market, are looking for various support tools. To this end, they use government assistance programs and undertake adaptation measures on their own. At the same time, real economic leadership is sought (Potkański et al., 2011) which may change the paradigm of competitiveness, marginalizing the priority of the resource factor in favour of competition (Wanat et al., 2018) and indicating the best management practices for the industry (Mikołajczak et al., 2020). It was noticed that a possible change of the competitive situation (Popek and Wanat, 2014), especially in the conditions of a permanent threat of a pandemic, requires action by all participants of the industry and its economic environment (Chudobiecki et al., 2016). The forester, forest entrepreneur, and then the wood industry cannot ignore the actual symbiosis of economic, ecological and industrial conditions affecting the situation of the wood-based sector (Chudobiecki and Wanat, 2015; Kusiak et al., 2018). Additionally, the increasing role of social and behavioural factors is taken into account, which prompts the selection of adequate remedial methods (Paluš et al., 2016; Wanat et al., 2020b). Even Hans Carl von Carlowitz (1713) claimed that forest management should be based on obtaining only the amount of industrial wood that could be restored through adequate renewal of forest resources. Currently, the idea of “Sustained Yield Forestry” challenges the fashionable theory of sustainable development (Słodowa-Hełpa, 2013), pointing – much more than “the need for sustainability” – to the need for preference for an integral economy (Słodowa-Hełpa, 2019), focused on “zero waste”. This is confirmed by research on the need for certification in forestry (Paluš et al., 2018), on the integration of cooperation and supply chain management processes, the competitiveness of the industry (Okupniak et al., 2017) and the search for a mesoeconomic circular economy model in forestry (Kusiak et al., 2019; Kaputa et al., 2020). Therefore, questions arise as to how forestry and wood-based industries should act in conditions of uncertainty (Wanat et al., 2020a). How will the specific sectoral market, subject to factors with irregular and asymmetric features change? Will there be a "new" model of the timber market?

MATERIAL AND METHODS

The aim of the study was to identify and attempt to evaluate selected anti-crisis tools that can be used in the wood-based sector in Poland in the face of economic uncertainty and limitations resulting from the epidemic. The types of these tools were analyzed on the basis of legal acts and industry proposals, taking into account selected government programs, initiatives of the National Forest Holding “State Forests”, and the activities of the Polish Chamber of Commerce of the Wood Industry, using a comparative approach. Then, the impact of the implemented anti-crisis measures on the functioning of enterprises in the wood-based sector in Poland (spatial scope) was analyzed. In terms of the subject matter, three groups of producers were included, in particular: wooden and cork products, producers of paper and paper products, and furniture producers (in accordance with the Polish Classification of Activities). In terms of time, the number of bankruptcies and restructuring in the selected branches of the wood industry was analyzed, comparing the secondary data of public and industry statistics for the first half of 2019 and 2020. In addition, in the same period, the economic indicators used by the Central Statistical Office were compared, based on the assessment of the situation formulated by entrepreneurs economic: current and projected. Reference was also made to sector reports, which were developed with the use of the diagnostic survey method. On the other hand, the values of the measures used for the comparative analysis were determined for selected branches of the wood industry, against the total industrial processing:

- F1 index: General Business Climate Indicator,
- F2 index: Current General Economic Situation of the Enterprise,

- F3 index: Expected General Economic Situation of the Enterprise.

The method of assessing the indicators and their characteristics are described in the part concerning the assessment of the economic situation of enterprises, presentation of the results and their discussion. Finally, referring to the descriptive approach, conclusions and recommendations were formulated.

COMPARATIVE ANALYSIS OF INSTITUTIONAL SUPPORT TOOLS

Analyzing institutional support tools to counteract the potential effects of the economic crisis, including those directed to entrepreneurs in the wood-based sector, the following were taken into account: government programs, initiatives of the National Forest Holding “State Forests” and the Polish Chamber of Commerce of the Wood Industry.

Government programs aimed at counteracting the effects of the economic crisis

The basic program implemented by the Polish government is the so-called “Anti-crisis Shield”. It is a comprehensive package of laws aimed at reducing the economic and social effects of the COVID-19 coronavirus epidemic. The following legal acts were included in the “Shield”:

- The Act of 31 March 2020, amending the Act on special solutions related to the prevention, prevention and combating of COVID-19, other infectious diseases and crisis situations caused by them and certain other acts (Journal of Laws 2020, item 568), the so-called “Anti-crisis Shield 1.0” (Ustawa, 2020a),
- The Act of 16 April 2020 on special support instruments in connection with the spread of SARS-CoV-2 virus (Journal of Laws of 2020, item 695), the so-called “Anti-Crisis Shield 2.0” [Ustawa, 2020b],
- The Act of 14 May 2020 amending certain acts in the field of protective measures in connection with the spread of the SARS-CoV-2 virus (Journal of Laws 2020, item 875), the so-called “Anti-Crisis Shield 3.0” (Ustawa, 2020c),
- The Act of 19 June 2020 on interest subsidies for bank loans granted to entrepreneurs affected by the effects of COVID-19 and on simplified proceedings for approval of an arrangement in connection with the occurrence of COVID-19 (Journal of Laws 2020, item 1086), the so-called “Anti-Crisis Shield 4.0” (Ustawa, 2020d).

The support program worth PLN 100 billion (4.5% of GDP) was considered the leading form of aid provided under the Anti-Crisis Shield. This program was called the Financial Shield of the Polish Development Fund (Resolution No. 50/2020 of the Council of Ministers of April 27, 2020 on the government program “Financial Shield of the Polish Development Fund for small and medium-sized enterprises”) (Uchwała, 2020). Financial aid was allocated to the following business groups:

- 1) Micro-enterprises (employing at least 1 employee), and the total value of the subsidy is PLN 25 billion,
- 2) Small and medium-sized enterprises (SMEs), with the total value of subsidies of PLN 50 billion,
- 3) Large enterprises for which the total value of subsidies is PLN 25 billion.

The program has the following objectives:

- improvement of financial liquidity,
- compensation for damages incurred as a result of a pandemic,
- job protection, especially in micro-enterprises and SMEs,
- support for sectors most affected by the pandemic,

–making it easier for entrepreneurs to return to the path of growth after a slowdown caused by the freezing of the economy in the period of serious economic disturbances.

Potential beneficiaries, however, were given the minimum conditions necessary to apply for support under this program, i.e. existence (activity) of the enterprise on 31 December 2019 and no arrears of taxes and social security contributions from that period.

The support for micro, small and medium-sized enterprises is provided through banks. On the other hand, large companies use several types of financing available directly from the Polish Development Fund. Part of the subsidy (up to 75%) may be cancelled 12 months after it was granted, after meeting certain criteria. One of them is to maintain active economic activity and unchanged employment during the period of the financial support (see: table 2).

Table 2. Characteristics of the program Financial Shield of the Polish Development Fund

Beneficiaries size	Employment structure and annual turnover of the beneficiaries	Form of financing	Maximum value of the subsidy for the beneficiary
Micro enterprises	Less than 9 employees (total full-time jobs without an owner), annual turnover or balance sheet total <equivalent to EUR 2 million	Interest-free subsidies available from commercial and cooperative banks,	324 000 PLN
Small and medium enterprises	Up to 249 employees under an employment contract (total full-time jobs), annual turnover <equivalent of 50 million EUR or balance sheet total <43 million EUR	Interest-free subsidies available from commercial and cooperative banks,	3 500 000 PLN
Large enterprises	Over 249 employees working under an employment contract (total full time jobs);	Individual nature, debt financing and capital commitment, implemented directly by the Polish Development Fund	

Source: own elaboration

By 3 August 2020, 345,905 companies employing 3,116,793 employees benefited from the Polish Development Fund program. The entrepreneurs were paid over PLN 60.5 billion through banks; this included micro-enterprises – PLN 18.7 billion, and small and medium-sized enterprises – PLN 41.8 billion (pfr.pl/tarcza.html).

Other forms of assistance encompassed by the Anti-Crisis Shield Act package include:

- 1) A non-returnable loan (in the amount of PLN 5,000) for micro-enterprises employing no more than 9 employees, paid by the Labour Fund (and serviced administratively by regional labour offices). The loan is cancelled if the company does not lay off its employees for the next 3 months.
- 2) Revolving loan, renewed automatically after the expiry of the loan taken earlier. The relevant regulations of the Polish Financial Supervision Authority enable banks to determine the company's creditworthiness on the basis of financial data as at December 31, 2019.
- 3) Working capital subsidies for medium-sized companies with a turnover decrease of at least 30% (monthly). The money received can be spent for any purpose related to the current activities of the company. In the case of the smallest companies and SMEs, working capital subsidies are provided by regional governments.
- 4) Modified rules of de minimis guarantees for loans granted to entrepreneurs from the aid package of Bank Gospodarstwa Krajowego (BGK). They concern in particular: increasing the scope of the guarantee to 80% of the loan amount, resignation from the commission for granting the guarantee, extension of the maximum guarantee period from 27 to 39 months for the working capital loan.

- 5) Possibility of tax loss in PIT and CIT backward. Loss on business activities of up to PLN 5 million, incurred in 2020, taxpayers may deduct, as part of the correction of the tax return, from the income earned in 2019 (and in subsequent years). This possibility is provided for those entrepreneurs who in 2020 will achieve revenues at least 50 percent lower than in 2019.
- 6) Exemption from compulsory social security contributions (for the period March – May 2020) for the self-employed and companies employing up to 9 employees, with additional conditions for economic activity and a reduction in the amount of income.
- 7) Deferment of payment or payment of contributions to Social Insurance Institution (ZUS) in installments.
- 8) Co-financing of wages during downtime of the enterprise from the Guaranteed Employee Benefits Fund (reduction of employment costs to 80%).
- 9) Standstill benefit for people running a business and for people who perform civil law contracts, paid by Social Insurance Institution (ZUS) for a period of 3 months.
- 10) Changes in the terms of employment of foreigners, enabling them to perform seasonal work. Employment was allowed after the work permit expires, which lasts up to one month after the end of the epidemic.
- 11) Suspension of the obligation to file for bankruptcy.
- 12) Simplification of the restructuring procedure.

The solutions adopted in the anti-crisis packages allowed entrepreneurs to maintain financial liquidity during the lockdown period 2020. The increase in bankruptcies was avoided in the wood industry, which is confirmed by the comparison of the number of bankruptcies and restructuring in the same period of 2019 (see: Table 3).

Table 3. Number of bankruptcies and restructuring in selected wood-based industries in the first half of 2019 and in 2020, respectively

The wood industry in comparison to industrial processing in general	I–VI 2019	I–VI 2020
Manufacturing/Industrial processing (total)	104	114
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	11	11
Manufacture of paper and paper products	4	3
Manufacture of furniture	7	7

Source: own elaboration based on (Raport Coface)

Regulations dedicated to the wood-based sector are included in Art. 50 of the Act of 14 May 2020 amending certain acts in the field of protective measures in connection with the spread of the SARS-CoV-2 virus (Anti-Crisis Shield 3.0) (Ustawa 2020c). This provision states that the organizational units of the State Forests that sell timber may, at the request of the entrepreneur who experienced a decrease in economic turnover as a result of COVID-19, redeem in whole or in part:

- statutory interest,
- compensation for the costs of debt collection,
- contractual penalties for the buyer’s failure to meet the sales schedule in the first period of the epidemic (March–May 2020).

These solutions were addressed to entrepreneurs without public law obligations. The redemptions offered in this respect constitute state aid.

Anti-crisis initiatives of the National Forest Holding “State Forests”

In view of the restrictions of the epidemic, the wood industry enterprises took precautionary measures. Companies related to foreign buyers intervened on the market of purchasing raw wood (roundwood). By limiting the quantities of wood ordered from the national monopoly

PGL “Lasy Państwowe” (National Forest Holding “State Forests”), the terms of the contracts were violated. Already in April 2020, the decrease in the planned harvesting of wood was almost 50%. Forest service plants also had to limit their activities. Therefore, the State Forests intervened and:

- extended the payment period to 90 days (the statutory period is 60 days);
- agreed to change the rules for wood collection contracted by entrepreneurs from the wood industry in 2020, allowing for the gradual extension of deadlines;
- contacted the contractors of concluded contracts, allowing the suspension of some forest works in progress and their postponement (to the second half of 2020 or later);
- have taken steps to implement at least 70% of forestry work planned for 2020;
- carried out an information campaign on the “Anti-crisis Shield” offer for entrepreneurs providing forestry services;
- adjusted timber harvesting to the changing needs, keeping the volume of stocks of timber (roundwood) at a level that does not threaten to depreciate;
- optimized the harvesting process by evenly involving all affiliated companies as possible, including forest service companies;
- additionally carried out other tasks related to forest management (for example: forest care, crop protection, renovation, waste collection and the like),
- undertook the tasks of renewal and afforestation in advance (Trębski, 2020).

These initiatives had an indirect impact on maintaining employment in enterprises in the wood-based sector. First of all, these were actions undertaken in the self-interest of “State Forests”. Their effectiveness can be assessed only after collecting reliable data, not merely on the basis of declarative information.

Aid activities of the Polish Chamber of Commerce for the Wood Industry

Additional actions aimed at the enterprises in the wood-based sector were taken by the Polish Chamber of Commerce for the Wood Industry in the conditions of an epidemic threat. The most important initiatives include:

- participation in legislative work, preparing industry regulations under the Anti-Crisis Shield (Anti-Crisis Shield 3.0) (Ustawa, 2020c);
- preparation of proposals for legislative changes concerning, inter alia:
 - a significant reduction in the input prices of timber at system auctions and through the “e-drewno” application,
 - recommendation of setting prices based on the market mechanism,
 - modification of contracts for enterprises benefiting from subsidies and operating in Special Economic Zones,
 - changing the rules of selling wood;
- advising on the possibility of obtaining financial support for the wood-based industry and related companies;
- establishing cooperation with the Polish Development Fund, managing the main aid program for enterprises;
- extending legal assistance to wood industry enterprises through cooperation with law firms;
- substantive assistance, including searching for new suppliers and recipients for companies affected by the crisis.

The effectiveness of the assistance provided by the Chamber of Commerce, proposed in the event of a pandemic, can only be assessed from a certain perspective. Its effects are not easily measurable, exerting a diverse, partially only temporary impact on the situation of

entrepreneurs. However, this aid is of key importance for the wood-based sector also long-term, both in the period of economic uncertainty and in times of imminent threat of crisis.

The economic condition assessment of the wood-based enterprises

The assessment of the economic condition of Polish enterprises was made on the basis of secondary data collected as part of opinion polls carried out at the end of April and beginning of May 2020 by the Polish Economic Institute and the Polish Development Fund. It was found that about 30% of enterprises in the wood-based sector recorded a decrease in sales in the first stage of the lockdown (second half of March 2020). These were mainly exporters whose revenues fell as a result of a sharp reduction in international trade (including a logistics freeze). The level of production was reduced, downtime was determined, resulting in disruptions in the supply chain. Moreover, employment was reduced. This was especially true of foreign workers and those employed under civil law contracts. Regarding full-time employees, the most frequently used measures were shorter working hours, lowering wages and giving up bonuses. Companies that completely stopped production most often directed their employees on holidays (Jabłoński, 2020). At the same time, institutional measures were taken: governmental, industry and individual initiatives of entrepreneurs, aimed at limiting the effects of freezing economic activity. Entrepreneurs willingly used the available tools, despite various difficulties in accessing them.

As a result, positive trends were noted after the initial economic slump. Based on the results of the *KoronaBilans MŚP*² survey conducted at the end of June 2020, the data were compared to the indications of the previous month. It was found that:

- over 36% of companies assessed their economic situation as good, and almost 34% neutral;
- over half of entrepreneurs (54.1%) estimate that their revenues will decrease in the next stage of the epidemic; however, the negative forecasts are gradually decreasing (for example, compared to May 2020 by over 10 percent);
- total suspension of production, sale or provision of services was declared by 3% of enterprises, while partial suspension of activity – 26.1%;
- at the same time, an increase in implemented investments (most often in machines and devices), or at least their maintenance at a similar level, was declared by 13.8% of companies in both groups (a decrease by 3 percentage points per month);
- almost 15% of entrepreneurs declared an increase in employment (previously 12.7%);
- 7% of enterprises planned the layoffs (1.7 percentage points less than a month earlier),
- 74.4% of entrepreneurs declared that they were ready to use government assistance; including 77% with regard to temporary exemption from the obligation to pay social security contributions, and 55% from employment subsidies;
- in general, the government's actions were positively assessed by 30% of respondents (increase by 22 percentage points); at the same time, 20% believed that the support proposed by the government should be higher and available in a longer period (korabilans.krd.pl).

Similar conclusions can be drawn on the basis of the results of the research on the economic situation conducted by the Central Statistical Office (Koniunktura..., 2020). For this purpose, entrepreneurs' opinions on the current and future situation of their companies

² SME research was conducted from April 2020 (monthly) at the request of the National Debt Register of the Economic Information Bureau; in the third edition of this report (discussed in study), a randomly selected group of 305 companies from the group of small and medium-sized enterprises was taken into account [www.krd.pl].

were analyzed. It should be emphasized that the respondents relied on subjective, general feelings, without referring to actual financial data. Thus, the results provided only approximate information on the directions of changes observed in the economy. Selected trends that can be used to program the development of the industry are graphically illustrated.

Figure 1 summarizes the values of the General Business Climate Indicator³ (F1) in total industrial processing and branches of the wood-based sector in 2019 and in the first half of 2020. A certain regularity was demonstrated. In April 2020 (the epidemic was announced in Poland on 20 March 2020), there was a sudden downturn in all the analyzed industries. The largest decrease was related to the production of furniture (index value: -63.9), and a slightly smaller one – production of wood and wood products (-55.3). In these cases, the values were lower than the value of the indicator for total production (-44.2). Producers of paper and paper products (value: -21.8) were the most optimistic about the situation, i.e. goods for which demand increased dramatically during the epidemic threat. After 20 April 2020, the phased lifting of restrictions related to the epidemic began. The gradual “freeing” of the market and the operation of governmental enterprise support programs resulted in an improvement of the general economic climate index (F1) in each sector of the wood-based sector (analyzed in the Polish Classification of Activities / PKD system). The F1 index assumed the following values: furniture production: -11.5; production of wood and wood products: -15.3; production of paper and paper products: -7.8. The index was still negative, but higher than the F1 value for total output (-19.9).

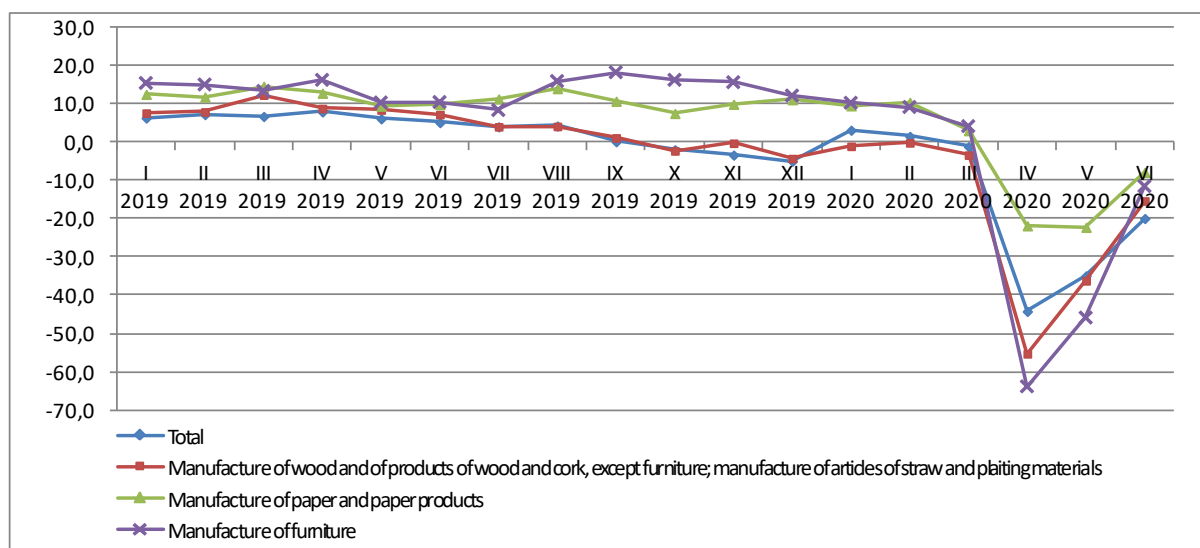


Figure 1. General Business Climate Indicator (F1) in the branches of the wood-based sector, compared to the total industrial processing. Source: own elaboration based on: (Koniunktura..., 2020)

The results of the opinion polls of entrepreneurs regarding the assessment of the current and future economic situation are graphically illustrated separately for:

- F2 Index: Current General Economic Situation of the Enterprise (Figure 2);
- F3 Index: Expected General Economic Situation of the Enterprise indicator (Figure 3).

On this basis, it can be concluded that in April 2020 entrepreneurs assessed the current situation much better than the future. In June 2020, this trend changed.

³ The used composite index (F1) was proposed by the Central Statistical Office (Koniunktura..., 2020), calculated as the arithmetic mean of the balances of responses to the monthly survey questions relating to the current and forecast economic situation of the enterprise; this index ranges from -100 to +100; positive values of the indicator mean “good” climate of the economic situation, negative values – “bad”.

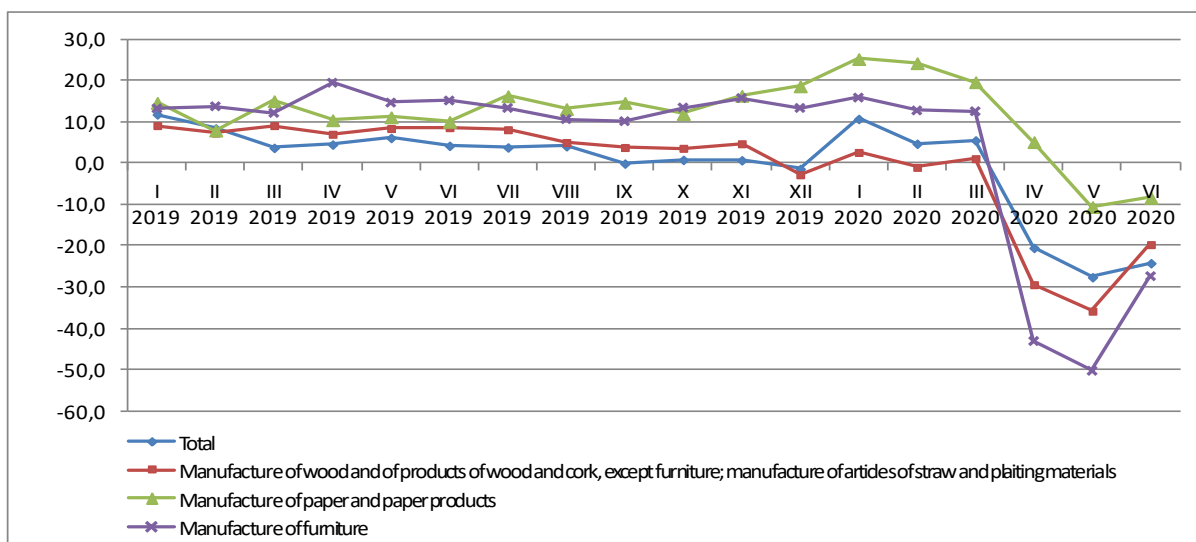


Figure 2. Current General Economic Situation of the Enterprise (F2) in the branches of the wood-based sector, compared to the total industrial processing. Source: own elaboration based on (Koniunktura..., 2020)

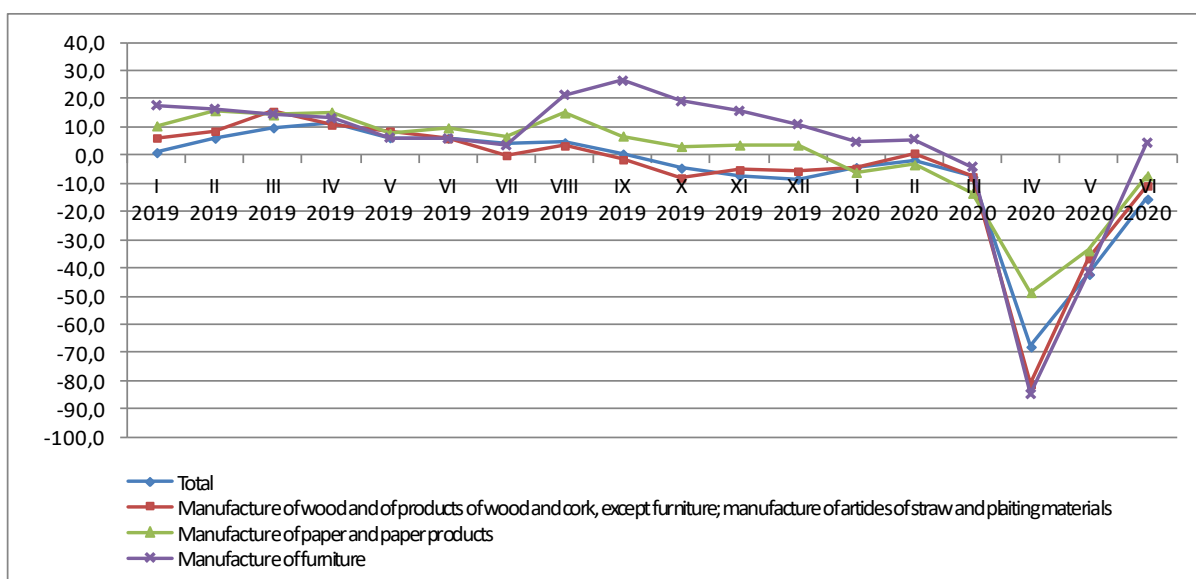


Figure 3. Expected General Economic Situation of the Enterprise (F3) in the branches of the wood-based sector, compared to the total industrial processing. Source: own elaboration based on (Koniunktura w przetwórstwie przemysłowym, budownictwie, handlu i usługach 2000–2020)

Referring to the results of the analyzed study, it was noticed that the representatives of all analyzed branches of the wood industry decided that in the following three months the economic situation of their enterprises would be better than the current one. Furniture producers assessed their situation best, expressed as an increase in the F3 index from -84.7 to 4.4. The same group was pessimistic about the current operating conditions of enterprises. In June, entrepreneurs from the paper industry gave similar assessments of the current and expected economic situation. The comparison of aggregated data shows that, despite the ongoing epidemic, entrepreneurs showed moderate optimism with regard to the prospects for economic activity for the wood-based sector.

CONCLUSIONS

Based on the comparative and descriptive analysis, the following conclusions and recommendations were formulated:

- 1) In conditions of economic uncertainty, Polish enterprises of the wood-based sector willingly use the available support tools, both institutional and industry-based, and consciously undertake intra-sector cooperation initiatives.
- 2) The Polish Development Fund program turned out to be the most attractive form of assistance provided under the Anti-Crisis Shield package. As part of the tool called the Financial Shield, support worth PLN 100 billion (4.5% of GDP) was offered. According to the data of the financing institution, by 3 August 2020, 345,905 enterprises, employing 3,116,793 employees, benefited from the Financial Shield program, and the value of the aid amounted to over PLN 60.5 billion.
- 3) The solutions adopted in the anti-crisis packages provided entrepreneurs with real support, allowing them to maintain financial liquidity, which significantly reduced the number of bankruptcies in the wood-based industry.
- 4) Actions taken by the government were positively assessed by 30% of respondents. Most entrepreneurs believe that the support should be higher and spread over a longer period. Despite different opinions, almost 75% of companies are still interested in government assistance.
- 5) About 30% of enterprises in the wood sector, mainly exporters, recorded a clear decrease in sales in the first stage of the lockdown (end of March 2020) due to restrictions in international logistics.
- 6) After the initial economic downturn (April 2020), already in June of the same year most entrepreneurs (around 70%) assessed their economic situation as good or neutral. The percentage of companies planning to lay off employees also decreased.

The gradual lifting of the limitations connected with the epidemic and the implementation of institutional government programs resulted in the improvement of the general economic climate index in each of the branches of the wood-based sector, distinguished under the Polish Classification of Activities. The economic situation is expected to improve, or at least stabilize (Wanat et al., 2020c). However, the best forecasts in this regard are from furniture manufacturers. Based on the analyzes, it can be concluded that entrepreneurs in the wood industry, despite the ongoing epidemic, show moderate optimism. In a longer-term perspective, however, as already indicated in the pilot studies (Wanat et al., 2020a), in view of the uncertainty and the threat of an economic crisis, it is worth reaching for intra-sectoral remedial tools based on relations and competitive cooperation.

REFERENCES

1. CHUDOBIECKI J., WANAT L., 2015: Industrial symbiosis and green business parks in the wood-based sector in Poland. [In:] Wood Processing and Furniture Manufacturing Challenges on the World Market; Chobanova, R., (ed.), pp. 221–228.
2. CHUDOBIECKI J., POTKAŃSKI T., WANAT L., 2016: Intermunicipal and intersectoral cooperation as a tool of supporting local economic development: selected examples from the forest and wood-based sector in Poland. [In:] Proceedings of the 9th International Scientific Conference on “The Path Forward for Wood Products: A Global Perspective”, Baton Rouge, LA, USA, 5–8 October 2016. WoodEMA: Zagreb, Croatia, pp. 187–195.

3. JABŁOŃSKI D., 2020: Sytuacja na krajowym rynku drzewnym coraz trudniejsza. Winny nie tylko koronawirus. Published online on: 09.05.2020, www.drewno.pl, accessed on: 12.09.2020.
4. Koniunktura w przetwórstwie przemysłowym, budownictwie, handlu i usługach 2000-2020, 2020: Central Statistical Office (GUS). Warsaw. www.stat.gov.pl.
5. KAPUTA V., LAPIN K., LEREGGER F., GEKIC H., 2020: Economic Dimensions of Environmental Citizenship. [In:] Hadjichambis A. et al. (eds.) Conceptualizing Environmental Citizenship for 21st Century Education. Environmental Discourses in Science Education, vol 4. Springer, Cham. https://doi.org/10.1007/978-3-030-20249-1_3.
6. KUSIAK W., MIKOŁAJCZAK E., WANAT L., 2018: Institutional and Industrial Symbiosis Case Study of Cooperation for Development in Forestry and Wood-Based Sector. [In:] Increasing the use of wood in the global bio-economy. Glavonjic B. (ed.), September 26th–28th, 2018, University of Belgrade, Belgrade, Serbia, pp. 388–399.
7. KUSIAK W., WANAT L., KLUS S., STYMA-SARNIAK K., 2019: Circular Economy from the Perspective of Scientific Research Papers in the Forestry and Wood-Based Sector in Poland. [In:] Chobanova R. (Ed.), Proceedings of the 12th Annual International Scientific Conference on “Digitalisation and Circular Economy: Forestry and Forestry Based Industry Implications”, 11–13 September 2019, Varna, Bulgaria. USB & WoodEMA, i.a., Sofia, pp. 33–38.
8. MIKOŁAJCZAK E., WANAT L., STYMA-SARNIAK K., CZARNECKI R., TOPCZEWSKA A., 2020: The Prospects to Applying the Best Practices Model as One of the Pillars of Business Management in the Wood Market, [in:] D. Jelačić (ed.) Management Aspects in Forestry and Forest Based Industries, WoodEMA ia., Zagreb, pp. 125–136.
9. OKUPNIAK M., WANAT L., MIKOŁAJCZAK E., SARNIAK Ł., DOLACIŃSKA-ŚRÓDA A., 2017: Selected outlier identification methods in the wood-based sector competitiveness potential research. *Intercathedra*, 33 (4), pp. 82–88.
10. PALUŠ H., PAROBEK J., VLOSKY R.P., MOTIK D., OBLAK L., JOŠT, M., GLAVONJIĆ B., DUDÍK R., WANAT L., 2016: Survey of Chain of Custody Certification in the Countries of Central and South Europe. [In:] Proceedings of the 9th International Scientific Conference on “The Path Forward for Wood Products: A Global Perspective”, Baton Rouge, LA, USA, 5–8 October 2016. WoodEMA: Zagreb, Croatia, pp. 85–92.
11. PALUŠ H., PAROBEK J., VLOSKY R.P., MOTIK D., OBLAK L., JOŠT, M., GLAVONJIĆ B., DUDÍK R., WANAT L., 2018: The status of chain-of-custody certification in the countries of Central and South Europe. *European Journal of Wood and Wood Products* 76(2): pp. 699–710, <https://doi.org/10.1007/s00107-017-1261-0>.
12. POPEK M., WANAT L., 2014: Price versus non-price factors of sector competitiveness: Case study of the round wood market in Poland. *Intercathedra*, 2(30), pp. 71–77.
13. POTKAŃSKI T., WANAT L., CHUDOBIECKI J., 2011: Leadership in time of crisis or crisis of leadership? Implications for regional development. *Intercathedra*, 4(27), pp. 45–52.
14. Raport Coface: Upadłości i restrukturyzacje firm w Polsce w I półroczu 2020 roku, www.coface.pl, accessed on: 12.09.2020.
15. SŁODOWA-HEŁPA M., 2013: Rozwój zintegrowany: warunki, wymiary, wyzwania. Integrated development: conditions, dimensions, challenges. CeDeWu, Warszawa.
16. SŁODOWA-HEŁPA M., 2019: Przeszłość w procesie poszukiwania recept na zarządzanie terażniejszością oraz kreowanie przyszłości. The past in the process of searching for recipes to manage the present and creating the future. *Nierówności społeczne a wzrost gospodarczy*, (57), pp. 35–53.

17. Statistical Yearbook of Forestry 2019, 2020: Central Statistical Office. Warsaw, [Rocznik Statystyczny Leśnictwa 2019, GUS, Warszawa].
18. TRĘBSKI K., 2020: Jaka pomoc dla przedsiębiorców leśnych z LP? Published online on: 30.04.2020, www.firmylesne.pl, accessed on: 12.09.2020.
19. Ustawa, 2020a: z dnia 31 marca 2020 r. o zmianie ustawy o szczególnych rozwiązaniach związanych z zapobieganiem, przeciwdziałaniem i zwalczaniem COVID-19, innych chorób zakaźnych oraz wywołanych nimi sytuacji kryzysowych oraz niektórych innych ustaw. Dz. U. 2020, poz. 568.
20. Ustawa, 2020b: z dnia 16 kwietnia 2020 r. o szczególnych instrumentach wsparcia w związku z rozprzestrzenianiem się wirusa SARS-CoV-2. Dz. U. 2020, poz. 695.
21. Ustawa, 2020c: z dnia 14 maja 2020 r. o zmianie niektórych ustaw w zakresie działań osłonowych w związku z rozprzestrzenianiem się wirusa SARS-CoV-2. Dz. U. 2020, poz. 875.
22. Ustawa, 2020d: z dnia 19 czerwca 2020 r. o dopłatach do oprocentowania kredytów bankowych udzielanych przedsiębiorcom dotkniętym skutkami COVID-19 oraz o uproszczonym postępowaniu o zatwierdzenie układu w związku z wystąpieniem COVID-19. Dz. U. 2020, poz. 1086.
23. Uchwała nr 50/2020 Rady Ministrów z dnia 27 kwietnia 2020 r. w sprawie programu rządowego „Tarcza finansowa Polskiego Funduszu Rozwoju dla małych i średnich firm”.
24. VON CARLOWITZ, H. C., 1713: Sylvicultura Oeconomica. Leipzig: Braun.
25. WANAT L., POTKAŃSKI T., CHUDOBIECKI J., MIKOŁAJCZAK E., MYDLARZ K., 2018: Intersectoral and Intermunicipal Cooperation as a Tool for Supporting Local Economic Development: Prospects for the Forest and Wood-Based Sector in Poland. *Forests* 9 (9), 531, 1; <https://doi.org/10.3390/f9090531>.
26. WANAT L., CZARNECKI R., KUSIAK W., MIKOŁAJCZAK E., SARNIAK Ł., SIKORA J., WIERUSZEWSKI M. 2020A: The Dilemmas Selection of Anti-Crisis Economic Strategy in Forestry and the Wood-Based Sector in the Perspective of a Long-Term Pandemic Threat – the Case of Poland. Preprints, 2020050231 (doi: 10.20944/preprints202005.0231.v1).
27. WANAT L., MIKOŁAJCZAK E., SARNIAK Ł., CZARNECKI R., TOPCZEWSKA A., 2020B: Application of Analytic Hierarchy Process (AHP) Algorithm to Optimize Business Model for the Kitchen Furniture Market, [in:] D. Jelačić (ed.) *Management Aspects in Forestry and Forest Based Industries*, WoodEMA ia., Zagreb, pp. 111–124.
28. WANAT L., SARNIAK Ł., MIKOŁAJCZAK E., 2020C: The Competitiveness of the Wood-Based Sector in Poland in the Economic Crisis Conditions, [in:] D. Jelačić (ed.) *Sustainability of Forest-Based Industries in the Global Economy*, WoodEMA ia, University of Zagreb, Faculty of Forestry, Zagreb, Croatia, pp. 117-121.
29. www.koronabilans.krd.pl
30. www.pfr.pl/tarcza.html

Streszczenie: *Działalność przedsiębiorstw sektora bazującego na drewnie w warunkach niepewności gospodarczej.* Stan epidemii w Polsce i wynikające z niego ograniczenia wywołały w gospodarce poważne zakłócenia. Przedsiębiorcy, prowadząc działalność gospodarczą w warunkach niepewności gospodarczej i zagrożenia kryzysem, poszukują różnych narzędzi wsparcia, w tym adekwatnych programów rządowych. W pracy podjęto próbę identyfikacji i oceny wybranych narzędzi antykryzysowych, dedykowanych i możliwych do zastosowania w sektorze bazującym na drewnie w Polsce. Wpływ tych narzędzi na aktywność gospodarczą poddano ocenie przedsiębiorców, ze szczególnym uwzględnieniem opinii producentów wyrobów z drewna oraz korka, producentów papieru i wyrobów z papieru oraz producentów mebli, wyodrębniając specjalizacje branżowe zgodnie

z Polską Klasyfikacją Działalności (PKD). W analizie porównawczej wykorzystano wybrane wskaźniki koniunktury, bazujące na danych wtórnych statystyki publicznej, odnoszące się do oceny bieżącej sytuacji gospodarczej oraz jej prognozie wyrażanej w opinii przedsiębiorców. W rezultacie stwierdzono, że mimo trwającego stanu epidemii, przedsiębiorcy sektora bazującego na drewnie relatywnie często korzystają z rządowych narzędzi wsparcia, wykazując w warunkach niepewności umiarkowany optymizm.

Corresponding author:

Elżbieta Mikołajczak
Poznań University of Life Sciences
Faculty of Economics
Department of Law and Enterprise Management in Agribusiness
ul. Wojska Polskiego 28, 60-637 Poznań, Poland
e-mail: emikolaj@up.poznan.pl
tel./fax.: + 48 61 8487110