

## How will COVID19 affect china's timber industry?

*CHENG Baoguo, ZHANG Jinzhu, Beijing Forestry University*

*LIU Yu, China Academy of Science*

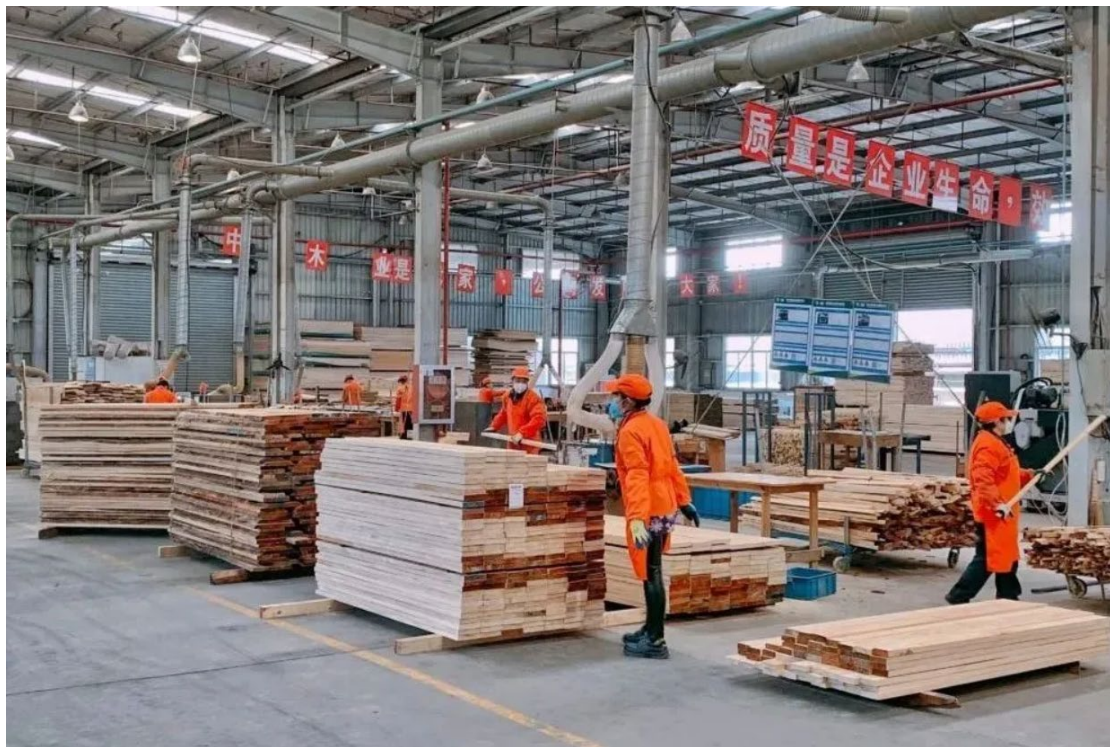
As China's economy continues to shift to high-quality development, the timber industry is also at a critical stage of transformation and upgrading, and the outbreak of COVID19 undoubtedly brings obvious pressure to the transformation and upgrading of the timber industry. Affected by the lockdown, extension of holidays and the postponement of resumption of work, the timber industry's production and business activities and trade exchanges have also been severely impacted. At present, timber processing enterprises have been suffered from production stagnation or insufficient work. According to the survey done China Timber Protection Industry Association (2020), nearly half of the enterprises reported that the epidemic situation had a great impact on their production, and their operations were nearly halted. Most enterprises are facing the problems of shortage of raw materials, shortage of labor force, shortage of working capital and rising freight rates. In the export trade of wood and wood products, the epidemic has led to a decrease in the efficiency of transportation and port unloading, and the export orders of wood processing enterprises have decreased significantly. However, the increased risk of global epidemic spread has also brought uncertainty to the resumption of production and cash flow of enterprises.



In order to mitigate the negative impact of the epidemic on the economy, the relevant departments of the state have successively issued active response policies. For example, the development and

reform department of the State Forestry and Grassland Administration has issued the notice on the overall promotion of the prevention and control of COVID19 and the resumption of production by forestry enterprises. In the next step, how to issue more aid policies to promote the healthy development of the timber industry requires an accurate quantitative assessment of the impact path of COVID19 on the timber industry and the impact of government macroeconomic response measures.

The output of China's timber industry has been seriously damaged due to the shutdown and other factors. COVID19 led to a 2.30%, 2.48% and 1.91% drop in production output in the wood processing industry, furniture industry and paper industry respectively. Among them, the shutdown of enterprises has played major role, causing the output of the industry to drop by 1.78% on average. The decline in labor productivity caused by the gradual resumption of work led to an average drop of 0.55% in the output of the industry, and the combined effect of the two led to an average drop of 2.33% in the output of the timber industry. This is mainly because the timber industry, as a typical manufacturing industry, relies on substantial production inputs such as labor, machinery and equipment. Once a link is interrupted, a chain reaction will be triggered. Accordingly, to compensate for the production capacity by extending the working hours after the epidemic depends on the cooperation of all links in the industrial chain, so the compensation for the loss of production capacity during the epidemic is relatively limited. In addition, wood products mainly meet the needs of industrial production, infrastructure, decoration and furniture, and the demand in this respect was restrained by the home mode during the epidemic. At the same time, the decline in export demand also led to a large reduction in orders from wood processing enterprises, resulting in a contraction in output in the wood industry.



Source: China Forestry Group Corp.

The epidemic has pushed up the production cost of China's timber industry and weakened the

price competitiveness of products. COVID19 led to product price increases of 0.51%, 0.78% and 1.03% in the wood processing industry, furniture industry and paper industry respectively. This is mainly because many timber processing enterprises cannot operate normally and make profits due to the impact of extended holidays and delayed resumption of work. The increase in production and operation costs has reduced the price competitiveness of wood processed products, which will have an impact on China's wood industry, which mainly depends on the increase in quantity. Although the decrease in people's consumption, investment and export demand has certain influence on lowering the price of domestic factors, the increase in production cost caused by the decrease in production efficiency plays a leading role in pushing up the price of wood products.

The epidemic situation has curbed the trade of China's timber industry and the international market share has declined. COVID19 led to a decline of 2.07%, 3.29% and 3.44% respectively in exports from the wood processing industry, furniture industry and paper industry. This is mainly because the epidemic situation has raised the production cost of the wood industry, resulting in insufficient export supply of wood products, thus reducing the market share of wood processed products, furniture and paper products in the international market. It is noteworthy that the upstream and downstream effects of the industrial chain will also increase the impact of the epidemic on the timber industry. For example, the furniture industry is an export-oriented industry, with exports accounting for 39.2% of total output. As a result, affected by the decline in transportation efficiency and the increase in trade costs, foreign consumers' demand for Chinese furniture has decreased, intensifying the reduction in the output scale of the furniture industry, thus reducing its demand for intermediate inputs of upstream wood processing products, resulting in a further decline in the output of the wood processing industry.

Reducing or exempting VAT is more effective to alleviate the negative impact of the timber industry, while releasing liquidity will have a negative impact on the export trade of the timber industry. At present, the introduction of value-added tax relief measures for small-scale taxpayers can alleviate the output losses of wood processing industry, furniture industry and paper industry by 0.28%, 0.07% and 0.10% respectively. It should be pointed out that the liquidity of the central bank in the market has mainly stimulated the investment demand and output expansion of investment products manufacturing industries such as construction industry. On the contrary, the timber industry is a typical traditional manufacturing industry and does not belong to the object of capital profit-seeking. The increase in market liquidity not only did not ease the financing pressure of the timber industry, but also increased its labor costs, further reducing the exports of the timber processing industry, furniture industry and paper industry by 6.19%, 5.17% and 3.97%, thus not conducive to the improvement of the international competitiveness of the timber industry.



Source: China Forestry Group Corp.

From the supply side and the demand side, the above identified the possible impact path of the epidemic on China's timber industry, and analyzed the impact of the government's macro-economic response measures on the timber industry. The results show that, firstly, COVID19 has pushed up the production cost of the timber industry, resulting in an average output loss of 2.23% in the timber industry, higher than the average output loss level of all industries (1.75%), resulting in a decline of 2.93% in export demand. Secondly, after the government took economic measures, the average output loss of the timber industry was 2.61%, which was 0.38 percentage points higher than that without measures. Judging from the heterogeneity of the impact of the measures taken, VAT relief is more effective in mitigating the negative impact of the timber industry, while liquidity has a limited effect on reducing the financing cost of the timber industry. Based on this, following policy recommendations are proposed:

First, to vigorously promote the coordinated resumption of work and production by enterprises in all links of the timber industry supply chain.

The resumption of work and production by enterprises is a systematic project, which requires the cooperation of upstream and downstream enterprises in the industrial chain. If one link gets stuck, the whole chain may not run smoothly. COVID19 has a great direct impact on the production and operation of the timber industry, and it has a negative impact on enterprises in all links of the industrial chain through the feedback effect of industry spillover. Therefore, it is suggested that the State Forestry and Grassland Administration (SFGA) should comprehensively sort out the key links of the timber industry chain in the process of promoting enterprises to resume work and resume production, accurately get through the difficulties in the supply chain, build an "alliance" for the cooperative resumption of work in the industry chain, and effectively improve the resumption rate

of work in the whole industry chain.

Second, to strengthen the policy support for timber export enterprises, especially furniture enterprises.

The decline in production efficiency has brought higher production costs to the timber industry and weakened its international competitiveness. As the pandemic continues to expand, the global supply chain will be impacted, which will lead to a further decline in overseas orders of China's export-oriented wood processing enterprises, especially furniture enterprises. Therefore, the negative impact of the epidemic can be alleviated by providing credit support to timber export enterprises and simplifying trade procedures. At the same time, the industry should pay attention to strengthening the quality of wood products and brand building, realize the transformation from "Chinese products" to "Chinese brands" and continuously enhance international competitiveness.

Third, to further reduce the tax burden on timber processing enterprises.

The industry should continue to provide preferential tax policies for timber processing enterprises, especially small and medium-sized enterprises, and reduce and exempt relevant legal taxes and service fees of enterprises, such as value-added tax, enterprise income tax, land use tax and social security payment, to further reduce operating costs. In view of the fact that the timber industry mostly exists in the form of forestry industrial parks, consideration should be given to reducing the production cost of the parks, providing subsidies to housing rents and the like or encouraging lessors to reduce rent.

Fourth, to guide the flow of social funds to timber processing enterprises with financing difficulties.



Source: Jinyu Tiantan Wood Company

As the timber industry is a traditional manufacturing industry with low added value, under the government's macro-economic response measures, the enhancement of market liquidity has a limited effect on reducing the financing cost of the timber industry. Therefore, it is necessary to provide special loans, special government funds, supply chain financial services and other assistance policies for the timber industry, especially small and medium-sized micro enterprises, to encourage social funds to flow to the real economy related to the timber industry, and to help timber processing enterprises tide over the difficulties.