

The Impact of COVID-19 on the Economy of Shanxi Province and the Countermeasures for Its Recovery

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Abstract. The outbreak of COVID-19 has swept the world and caused a huge impact on the world and China's economy. Although it has entered the post-epidemic era, the epidemic is still an uncertain factor for economic development. Studying the impact of COVID-19 on the economy of Shanxi Province can help the province reasonably formulate macro-control policies and consolidate the results of the recovery of the epidemic, which has important theoretical and practical significance. This study conducted a study on the impact of the epidemic on the economy of Shanxi Province, analyzed the impact of the epidemic on the economy of Shanxi Province in different periods, and concluded that the epidemic seriously affected the economic growth of Shanxi Province in 2020 and 2022, and had an impact on various industries, especially transportation, cultural tourism, catering and accommodation. Additionally, it examined Shanxi Province's progress toward economic and employment recovery in the wake of the pandemic. All industries in Shanxi Province showed apparent signs of recovery as a result of the government hosting employment fairs and setting up promotional tools. Finally, it offers policy recommendations to support the ongoing modernization and transformation of conventional sectors, aid in the recovery and expansion of small, medium, and micro companies, and boost public investment.

Keywords: Epidemic impact; economic recovery; transformation.

1. Introduction

1.1. Research Background

The COVID-19 pandemic has dealt a heavy blow to the world economy, with dramatic changes in ways of production and life. Globalization has been and will continue to be impacted by COVID-19, which has slowed down the process of economic globalization. The WTO's survival as a major organization in global economic governance is also at risk. The international environment is at its darkest hour [1]. Fernandes believes that worldwide, every month of shutdown will reduce the world GDP growth rate by 2%-2.53%, which has a greater impact on service economies [2]. Scott's disaster impact model shows that U.S. GDP contracted by nearly 11 percent in 2020 [3].

However, Xu Kangning believes that the novel coronavirus is an exogenous variable after all, and its impact on the economic system has its own impact mechanism. The micro-foundation of the world economy has not been greatly damaged, and once the novel coronavirus epidemic ends, the economic development will see a blue sky again [4]. Sun Jize et al. conducted a simulation analysis of the impact of COVID-19 on the global macroeconomic and industrial structure, and concluded that the performance of COVID-19 at the macro level in the short and long term is significantly different. Agriculture and the service industry will have a large decline in the short term, but will gradually recover in the long term, while the manufacturing industry will have a limited impact in the short term, but it still causes profound changes in the global value chain pattern [5].

Zhu Kunfu's research shows that the epidemic will have an impact on China's production and supply in the short term, increasing the risk of China's industrial chain moving out. The epidemic has led to a short-term production and export supply gap in China [6]. Wang Bing and Li Lin studied the impact mechanism of the epidemic on total factor production and believed that the impact of COVID-19 on total factor production was characterized by diversity and complexity, which would bring significant uncertainty risks to long-term economic development [7]. Zhi Yan and Luo Changchang

believe that it should trigger thinking about the business environment and government governance, and be prepared for danger in peacetime [8].

1.2. Research Significance

Since most studies focus on the impact of the epidemic on the global and national economy, there are few studies on the regional economy. A few literatures are mostly about the developed provinces in southern China, and there is a lack of studies on the losses suffered by Shanxi Province in central China. Most of the studies focused on the early stage of the epidemic, and there was a lack of research on the post-epidemic era. Therefore, this paper studies the impact of the novel coronavirus epidemic on the economy of Shanxi Province, provides reference and suggestions for promoting the resumption in Shanxi Province in the post-epidemic era.

2. The Impact of Epidemic on the Economy of Shanxi

The impact of the COVID-19 epidemic on the economic system is transmitted from the micro to the medium and then to the macro. The epidemic first affects the behavior and psychology of micro entities, such as enterprises or users. Thus, the impact will be transmitted to the economic level of the middle industry, in the direction of the supply side and the demand side, in the direct and indirect aspects of the impact, and eventually will be transmitted to the macro level, causing fluctuations in economic growth.

The primary industry's output value in 2020 has a stable and positive growth rate, and the epidemic has a small impact. The cumulative growth rate of the second industry in the first two quarters was negative, but in the third quarter it became positive.; The recovery of the growth rate of the output value of the tertiary industry is slow, the cumulative growth rate of the first three quarters is negative, until the fourth quarter became positive growth. It can be seen that the impact of the epidemic has slowed down the growth of the three industries. The most serious impact of the three industries is concentrated in the first and second quarters, and the impact industries are mainly concentrated in the secondary and tertiary industries, of which the tertiary industry has been the most seriously affected. In the second quarter, as the fundamentals of the national epidemic were controlled, the economy rebounded briefly, due to the knock-on effect of the spread of the international epidemic on the Chinese economy, the growth rate of the industrial economy slowed down steadily in the third and fourth quarters of 2020.

By 2021, the epidemic is basically under control and economic growth is restored. The cumulative growth rate of the first industry in the fourth quarter was 9.8%, 12.5%, 9.9%, 9.1%, the cumulative growth rate of the second industry in the fourth quarter was 21.1%, 13.8%, 11.3%, 8.1%, and the cumulative growth rate of the third industry in the fourth quarter was 14.9%, 10.9%, 9.9%, 10.2%. The three industries achieved rapid positive growth in the four quarters. The second industry experienced a growth rate of 8.1% in the fourth quarter and a growth rate of 21.1% in the first quarter. The growth rate of the three industries fluctuated greatly in the first and second quarters. In the second quarter, the output value of the first industry saw a significant increase, and then it resumed steady growth in the third and fourth quarters. The secondary industry's output value declined significantly in the second and third quarters after reaching the highest growth rate in the first quarter. The tertiary industry experienced a high growth rate in the first quarter, then fell rapidly in the second quarter, and then maintained nearly uniform growth in the third and fourth quarters.

In 2022, the number of confirmed cases in China has increased, and the momentum of economic growth has slowed down, and the growth trend is not smooth, especially the explosive increase of cases in the second and fourth quarters. The second and third industries are experiencing a significant decline in their economic growth rate. From the perspective of industry, the epidemic has the strongest impact on the tertiary industry, and the economic growth rate of the tertiary industry is the slowest among the three industries, which is similar to the situation in 2020, but the difference is that the economic growth rate of the tertiary industry shows a declining trend with the quarter, which is also

consistent with the trend of confirmed cases increasing with the quarter in 2022. Although the output value of the secondary industry also declined with the increase in the number of confirmed cases, there was a significant rebound growth in the third quarter when the number of confirmed cases was relatively small, indicating that the secondary industry was more sensitive to the impact of the epidemic, and once it was not affected by the epidemic, its recovery momentum was very strong.

Industry, particularly labor-intensive manufacturing, has been greatly affected by the control of the flow of people, according to different sectors. The province's total industrial added value in 2020 is 673.392 billion yuan, a 5.3% increase over the previous year. The mining industry grew by 8.0%, a year-on-year increase of 3.3%, and raw coal production increased by 91.11 million tons, as a result of the surge in coal prices in 2020. The value added of manufacturing increased by 4.2 percent, but the output of 14 major industrial products, including alumina, copper, fertilizer, liquor, vinegar and automobiles, fell, with the automobile industry hit the hardest, with automobile output down 40.2 percent and new-energy vehicle output down 62.8 percent. The production and supply of electricity, heat, gas, and water decreased by 1.0%. The added value of the construction industry increased by 6.6%, the growth rate decreased by 1.4%, and the total output value increased by 9.89%, but the growth rate decreased by 4.4%. The industrial and construction industry is limited by the flow of people, the international external environment is tight, the import of raw materials and other reasons for the decline in output, but the overall industry impact is small, the total output value and added value of the industry showed a growth trend, but the growth rate decreased slightly.

The service sector has been hardest hit by the outbreak. In 2020, the value added of the service industry grew by 2.1%, down 5% year-on-year, and was hardest hit. The health and social services sector have been the most directly affected, and the government has increased funding for epidemic prevention, hospitals and epidemic control in response to the epidemic. The epidemic has also caused an increase in the demand for nucleic acid testing and other health work, which has promoted the positive growth of the added value of public administration, health and social work industries. Information transmission and technology also suffered a positive impact, and the added value of the industry increased by 22.8%. In other services, the growth rate of the financial industry and the real estate industry is basically the same as in previous years, 6.8% and 5.7% respectively, and the impact of the epidemic is not significant. Wholesale and retail, accommodation and restaurant, rental and business services were the hardest hit, with negative value-added growth rates of -1.8%, -11.5% and -4.4%, respectively. The decline in added value of these industries is a result of the weak consumption power caused by strict control policies during the epidemic.

3. Economic Recovery Situation and Countermeasures

3.1. Economic Recovery in the Post-pandemic Era

The Shanxi provincial government has made significant efforts to restore the economy and promote employment since the end of the epidemic. From January to March, the provincial government jointly carried out employment assistance activities in the province, providing policy support for employers and job seekers, and helping enterprises to resume work and production. A total of 1,969 job fairs were organized, providing 1,220,200 jobs, 774,200 people sought employment, and 209,500 people reached employment intentions. The government organized 1,590 special buses and trains to help 30,200 migrant workers return to work. In April 2023, Shanxi Province organized the Exchange Conference on Strengthening employment services and promoting high-quality development. The government organized 220 top ten platform enterprises in 11 cities, 100 universities and technical schools, 400 private enterprises, and nearly 800 units to participate in the event, and carried out a number of interactions such as information release, roadshow promotion, talent recruitment, and venture financing. On the same day, 4,640 people reached employment intention at the scene.

Since the end of the COVID-19 epidemic, Shanxi's economy has recovered and developed. According to the economic operation of the province from January to May recently released by the

Shanxi Provincial Bureau of Statistics, industrial production in Shanxi Province grew steadily, market consumption grew rapidly, and employment prices were generally stable and continued to recover steadily. The added value of the coal industry increased by 1.1 percent, while that of the non-coal industry increased by 7.8 percent. The tourism market continued to recover, and the number of scenic spots in the province received 30.395 million people, an increase of 1.9 times; Ticket revenue was 910 million yuan, up 4.4 times; The operating income was 1.65 billion yuan, which was a 2.3 times increase. The province created 201,000 new urban jobs, disposable income of urban residents increased by 4.3 percent, and rural residents saw a 6.4 percent increase in their per capita disposable income, which was 0.3 percentage points faster than Chinese average.

3.2. Suggestions and Summary

3.2.1 Transformation and upgrading of traditional Industries

Novel coronavirus epidemic has brought huge challenges to traditional industries, and the epidemic has caused the most direct and far-reaching impact on the tertiary industry. Affected by the needs of prevention and control in the post-epidemic era, its resumption of work and production has obviously lagged behind other industries. In response to the crisis, many companies have jumped into the new economy and new industries, resulting in many new business models. 5G, big data, artificial intelligence and other industries are rising rapidly. The Internet can effectively support the industrial transformation and upgrading of Shanxi [9]. The government should provide more policy support and collaborate with enterprises to promote the development of the digital economy, make the most of new technologies like big data and artificial intelligence, accelerate digital transformation and upgrading, and help the tertiary industry resume production.

Affected by the lockdown and control during the epidemic period, the life of Chinese residents is moving towards the online development. After the epidemic is over, the government should also concentrate superior resources and policies to continue this development trend. While developing traditional online economy such as online shopping, take-out and entertainment, it should also develop new economy such as online teaching, home working and telemedicine. The government should also continue to expand domestic demand, promote consumption upgrading, business reform, introduce new technologies such as 5G and VR into traditional entertainment and tourism industries, develop services such as home office, online teaching and training, and build new service formats.

3.2.2 the recovery of small, medium, and micro-sized enterprises

The government should provide liquidity support to small, medium, and micro-sized enterprises and provide appropriate financial subsidies to prevent their capital chain from being cut off. Following the post-epidemic time, the difficulties they face still exist, and the relevant government departments should strengthen their support and introduce preferential policies to help them recover social development as soon as possible. For the transportation, tourism, accommodation and other enterprises hardest hit by the epidemic, measures such as adjusting taxes and fees can be taken to help them recover vitality as soon as possible.

Affected by the COVID-19 epidemic, people's consumption and investment willingness and capacity are seriously insufficient, and foreign demand has dropped significantly, and exports have also been greatly impacted. Most of the enterprises in Shanxi Province are located in mining industry. Increasing government investment is inevitable to stabilize the economy, but it should focus on starting and arranging key projects. If increasing investment in the mining industry, it is very easy to cause overcapacity. Shanxi should vigorously develop strategic emerging industries and high-tech industries, and combine the new generation of information technology with traditional industries [10]. Investment should concentrate on the digital economy and new industries, make up for the shortcomings of infrastructure, and provide support for industries that are greatly affected by the epidemic, so as to promote the economic recovery and steady growth of the province.

3.2.3 Countermeasures on the demand side

Income is the basis of consumption, promoting economic development cannot be separated from the consumption demand supported by income. Among them, full employment can provide income security. By providing policy support and economic subsidies, the government can appropriately provide preferential policy support such as reducing tax rates for enterprises that expand the recruitment of employees, improve the willingness of enterprises to recruit, provide more employment opportunities for residents, increase residents' income, and increase residents' money bags, so as to improve residents' consumption power.

Consumption willingness is an important factor affecting consumption. During the three-year epidemic period, residents' willingness to consume was severely affected by external shocks and inevitably affected by their own income level, resulting in a relatively low domestic consumption willingness. Let consumption have no worries, in order to make consumption hot, in order to promote economic development. The governments need to make more efforts to ensure people's livelihood, constantly improve the social security system, establish a long-term mechanism to expand consumption, further improve the education, medical care, elderly care and other security systems, raise the level of security, and reduce residents' worries, so that residents can reduce precautionary savings and increase their willingness to consume.

4. Conclusion

This paper first analyzed the impact of the epidemic on the economy of the world and China, and believed that this study could help Shanxi Province to resume work and production in the post-epidemic era. Then it analyzed the impact of the epidemic on Shanxi Province. In the early 2020, the impact of the epidemic on the economy of Shanxi Province was almost negative for the whole industry. This kind of shock mainly impacts the overall economy by having an impact on a few directly affected industries and then indirectly affecting other industries. Affected by the sealing and control policy, the movement and travel of people are limited, and the most directly affected are the transportation, warehousing and postal sectors, followed by the traffic restrictions and the non-gathering and non-mobility policy, the most directly affected sectors are the accommodation and catering industry and the culture, sports and entertainment industry. Then, according to the economic recovery of Shanxi Province in the post-epidemic time, the Shanxi provincial government promoted the return to work and production by carrying out job fairs, organizing special buses and trains and other ways, so that the economy of Shanxi Province has been recovered relatively quickly. After that, it gave policy suggestions from three aspects: promoting the upgrading and transformation of traditional industries, helping the recovery and development of small, medium-sized and micro enterprises, and increasing government investment. Although this study has analyzed the impact of COVID-19 on Shanxi's economy and achieved certain results, there are still several problems that need to be improved: First, there is a lack of data acquisition. Due to the limitation of data sources, this study can only use indirect data to analyze the impact of COVID-19 on various industries, which is partially different from the actual situation. Second, the research method used in this study only evaluates the impact on Shanxi Province, which can be applied to other regional economies to obtain more extensive research results. In the future, more cases can also be added to make further studies on the economy in the post-pandemic era.

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