Research on the influence of the development of pillar industries on the regional economy

Hengyi Shen

University of Sydney, Australia shy2021phd@163.com

Keywords: Pillar industry; Regional economy; Coordinated development

Abstract: The development of pillar industries is closely related to the development of the regional economy. The article mainly analyzes the role of pillar industries in promoting regional economy, discusses the mutual influence mechanism between pillar industries and regional economic development, and proposes rationalized countermeasures for regional economic development to promote the development of pillar industries.

1. Introduction

With the continuous development and innovation of science and technology, the wave of upgrading and innovation of the global industrial industry is constantly advancing, and some industrial industries are continuously optimizing themselves with the in-depth application of new technologies and high-end operation concepts, continuously improving their market competitiveness, and finally transforming into pillar industries in regional economic development to achieve the goal of sustainable development. The influence of the development of pillar industries on the development of the regional economy is indisputable, and the development of the regional economy has a fundamental role or significance in the formation or growth of pillar industries. In this paper, we focus on analyzing the influence mechanism of pillar industry development and regional economic development and propose countermeasures to promote the development of local pillar industries and regional economy.

2. The driving effect of pillar industries on the regional economy

Pillar industries have greater income elasticity in the development process and have a strong correlation with other industries, which can quickly absorb new technological achievements to the greatest extent, provide favorable conditions for industrial upgrading, and then drive the economic growth of the whole region. Pillar industries can drive the development of other industries and comprehensively promote the overall growth of the national economy because of the high growth rate of the pillar industries themselves and the three effects of the rapid growth phase of the pillar industries. First of all, the retrospective effect, in the process of pillar industry development, there are specialized sectors to provide production materials and human resources for them, and the development of pillar industry sectors will drive the progress of these sectors. Since the pillar industry sector is technical, it increases the demand for raw materials and machines as the industry continues to develop rapidly, and at the same time, these demands put forward higher requirements for modern design concepts and design methods. Secondly, the forward effect, the pillar industrial sector has a stimulating and inducing effect, mainly for new industries, new technologies and the role played by new energy sources. Modern industrial activities play an important role in the development of new industrial activities, laying a good foundation for them. It also reduces the input costs of other industrial sectors and attracts more entrepreneurs, who in turn develop new products and services. Thus, the pillar industries have strong stimulating power and provide the possibility for a wider range of economic activities to be developed. Finally, the side effect, mainly the pillar industry sector has a good promotion effect on the development of the surrounding regional economy. As the pillar industry itself has a certain driving effect, it will cause the surrounding industries to change, the emergence of new pillar industries, to a large extent, change the entire region, the emergence of the old downtown transformation and new downtown phenomenon. For example, the development of the cotton textile industry in the United States has promoted the development of Boston, and the automobile industry has laid a good foundation for the development of Detroit, which can fully reflect the side effect of the pillar industry. The emergence of the side effect accelerated urbanization, changed the previous highway traffic and service style, strengthened the modern concept of the production process, and had a greater impact, which exceeded the impact caused by the new activities themselves and inputs. In the process of economic regional development, the pillar industry sector does not exist alone and cannot achieve independent development; the development of the pillar industry sector has a close connection with the development of other industry sectors and has a certain ripple effect. The development of the pillar industry sector can drive the rapid development of other industry sectors and even the whole national economy, which has an obvious driving effect. The emergence of regional economic growth points, whether long-term capital accumulation or short-term capital aggregation, is formed by using strong support points and industrial groups, in which the pillar industries play an irreplaceable role. Pillar industries are the driving force for the growth of the entire economic space and the core of the regional industrial structure. Only around the pillar industries can various specialized and auxiliary sectors be established, thus forming a complete economic system, improving the rationalization of the regional industrial structure, and highlighting the role of pillar industries in promoting regional economic growth. Besides, in the process of regional economic development, there will be different pillar industries at different stages of development, and the changes and development of these pillar industries will also promote the growth of the regional economy. Japan is a prominent example. After the war, the Japanese economy got high growth, and automobiles and steel are the pillar industries of the Japanese economy, and the alternation and development of the pillar industries provide the impetus for economic growth, and the development of the pillar industries promotes the growth of the regional economy.

3. The mutual influence mechanism of pillar industries and regional economy

The selection and development of local pillar industries are mostly based on the original industrial clusters, which have undergone several rounds of industrial upgrading and structural adjustment, and in this process, they are also accompanied by the transformation and improvement of industrial quality and value. In general, the pillar industries in the development process, on the one hand, need to the efficient allocation and utilization of local advantageous resources, and constantly improve the efficiency and quality of product production; on the other hand, they also need to realize the optimization of self and achieve the goal of sustainable development. Pillar industry development will eventually bring two important results: first, the efficient allocation of resources can effectively compress costs and promote the development of industry in the direction of high profits; second, the efficient operation of industrial factors and promote the improvement of industrial production and operation efficiency. It can be seen that pillar industries are the result of industrial restructuring, and also the result of industrial quality improvement and industrial value conversion, which will undoubtedly bring a significant positive impact on the development of the regional economy. At the same time, the development of the regional economy can drive the expansion of market demand and the increase of elasticity of demand structure through the expansion of economic scale, to effectively promote the optimization of industrial structure and realize the transformation and upgrading of industry, among which, some industries will become the pillar industries in the development of the regional economy.

3.1 Pillar industry development to promote regional economic development

3.1.1 Industrial structure adjustment to promote the quality of production efficiency

The emergence of pillar industries will inevitably undergo a series of industrial structure

adjustment beforehand, and local industrial departments will issue a series of policy measures to guide the local industrial structure to merge and deploy based on the consideration of regional resources, existing industries, as well as high-tech and management level, to make the local industrial structure more advantageous for development. In this process, some highly competitive industries are bound to become the pillar industries of regional economic development. The pillar industries that emerge are either industries that can use local advantageous resources on a large scale or knowledge-intensive industries that are developed by local governments based on the new economic geography and diamond theory and use a large number of new production technologies. At the same time, pillar industries are an indispensable part of regional economic development. Through the use of new production technologies and advantageous resources, pillar industries can effectively improve the production efficiency and product quality of all production factors, and thus effectively increase the scale of regional economic development.

3.1.2 Industrial quality improvement ensures the stable supply-side structure

The pillar industry is also an industry with relatively high industrial quality, and the overall technical level, organizational efficiency, and industry management and operation efficiency contained in the local pillar industry are relatively higher than those of general industries. In the process of regional economic development, all types of industries tend to go through a series of elimination of winners and losers, and the pillar industries emerge mostly based on the development of the original industry, and eventually stand out through industrial quality improvement. Pillar industries can effectively improve the production efficiency and quality of products through the optimization and innovation of the overall technical level, while good organizational efficiency, industry management, and operational efficiency can strive for greater total market demand, maintain a good product supply ratio, and ensure the stability of the supply-side structure to promote the steady improvement of the regional economy.

3.1.3 Industrial value conversion improves industrial competitiveness and industrial value

Some industries in the original industrial cluster use a lot of high technology and become knowledge-intensive industries. The use of high technology will allow intelligent machinery and equipment to gradually replace manual production, and production efficiency will be effectively improved; at the same time, the use of high technology will also drive the scale of industrial capital. Automation, information technology, intelligence has become the main trend of future industrial development, looking at the pillar industries across the country, almost all towards this direction of development, even if the tourism, accommodation, and other pillar industries as part of the region, also pay great attention to information technology, intelligent construction. As a result, the added value of the pillar industry products is enhanced, the competitiveness of the industry and the value of the industry are effectively enhanced, and the profits of the industry are continuously expanded, thus driving the development of the regional economy.

3.2 Regional economic development promotes the development of pillar industries

3.2.1 The total regional economic volume is upgraded to lay the foundation for industrial transformation and upgrading

From the development practice of developed regions and cities in China, the enhancement of the total regional economy will effectively drive the enhancement of population and capital in the region, and various types of technologies will be gathered continuously. The enhancement of population and capital will drive the enhancement of market demand, and the gathering of technology will lay the foundation for industrial transformation and upgrading. Under the two-way stimulation, some industries in the local primitive industry group will, under the rapid development of such economic infrastructure conditions, continuously optimize themselves in terms of production level and production efficiency, continuously improve all aspects, and finally become local pillar industries and get further development.

3.2.2 The optimization of regional economic growth structure drives the adjustment of industrial supply and demand structure

The regional economic growth structure is mainly reflected in two aspects: one is the demand side; the other is the supply side. The growth of consumer demand, the growth of capital investment demand, and the growth of export demand will drive the growth of the demand side, while the growth of the supply side is to meet the growth of demand. In the supply side demand, consumer demand is the micro embodiment, while capital investment demand is the main form of expression, and the change of capital investment demand structure, representing the trend of local industrial development. On the demand side, in addition to meeting consumer demand, the supply of capital investment represents the market's concern and support for the development of local industries, and the development of pillar industries and the demand for capital will undoubtedly receive the market's focused attention and support. Thus, the optimization of the regional economic growth structure will, to a certain extent, lead to the adjustment of the industrial supply and demand structure, so that the pillar industries can get better capital support. However, in the process of optimizing the regional economic growth structure, it is also necessary for the government to effectively regulate and control it to ensure the sustainability of the regional economic structure development.

3.2.3 The improvement of regional economic development quality promotes the integration of the industrial economy

The quality of regional economic development is the final result of the quality of regional industrial development. The good quality of regional economic development with certain advantages inevitably indicates that the allocation and utilization efficiency of various resources and factors in the region is high, which can provide strong development space for the pillar industries. The economic value created by the pillar industries occupies a larger proportion of the regional economic development results, and the improvement of the regional economic development quality also indicates that the local pillar industries can be better integrated into the development of the regional economy and realize the coordinated development of both.

4. Regional economic development countermeasures to promote the development of pillar industries

4.1 Provide more employment opportunities for the labor force

Industrial structure change is a key factor affecting the employment level of the labor force. In the first year of industrial structure change, the unemployment rate is 6.5%, and in the third year, the unemployment rate is as high as 42%. Therefore, it can be seen that the economic industry decay of the region is a key factor affecting the level of regional economic development, which is not conducive to the rapid development of the regional economy. Facing the high unemployment rate in the region, more investments should be actively attracted to change the current situation of depressed regional economic development. From the perspective of the evolution of the regional industrial structure, the secondary industry has a higher share compared to the primary industry and the tertiary industry, and the industrial structure will show deterioration after the end of the special zone policy. Under the influence of the "re-employment special zone" policy, it will help to improve the unemployment rate, accelerate the restructuring of the regional industry, and provide a pillar for the economic development of Dongchuan. It should actively absorb the amount of foreign capital to drive the development of other industries in the region, accelerate the industrial restructuring, and prevent the regional economic development from falling into a difficult situation again.

4.2 Actively transform the regional administrative pattern

The change of industrial structure is the main influencing factor affecting the regional economic development, prompting a large change in the administrative pattern. Besides, the operation of the industrial pattern is also a key factor affecting the development of the regional economic pattern,

and the industrial structure should be adjusted well to ensure that it can have a deep connection with the industrial pattern. In response to this phenomenon, the relevant leaders have compared this phenomenon to the phenomenon of "small horse-drawn car, thin horse-drawn car", the superstructure is relatively large, but the economic foundation is more fragile, is a key factor affecting the development of the regional economy, is not conducive to the rapid development of the regional economy, the effect of regional economic development has caused a greater impact. Personnel files in a region show that the total number of cadres and authorities of enterprises and institutions in the city is as high as 7,568, of which 802 are at the section level, 176 at the county level, and 24 at the district level. The ratio of financial support to the number of self-employed people is 1:33, a ratio that is also second to none in the country. Information on data from the Bureau of Finance shows that the total revenue in the region in 2018 was 42.68 million yuan, the total local revenue was only 27.56 million yuan, and the spending of civil servants accounted for 90 million yuan. It can be seen that the administrative body in the region is relatively bloated, which produces a drain on the industrial surplus and increases the difficulty of industrial restructuring. Besides, influenced by the huge administrative volume factor, it has caused a greater impact on the development of the regional economy, requiring every policy guide should be cautioned to formulate a perfect regional economic development policy to provide the impetus for the development of the regional economy.

4.3 Promote the transformation of urban development

Pillar industries are the main influencing factors of resource-depleted cities. Pillar industries exist in all aspects of life and are the main influencing factors of regional economic development. As most regions mainly adopt a single production structure in the development process, this production structure will form a strong "crowding-out effect" with other industries in the actual application process, which makes the transformation and development of cities more difficult and has a great impact on the sustainable development of cities. The industrial structure is a key factor influencing urban development and plays an important role in accelerating urban transformation and promoting industrial restructuring. Therefore, according to the actual development of the region, new industries with special characteristics should be actively sought to ensure that they can make outstanding contributions to the development of the city. Besides, it is also necessary to strengthen the cultivation of alternative industries. The implementation and development of the cultivation work need to be rooted in the regional production factors, and the development potential in the region should be explored in depth to establish a model that conforms to the green cycle and promotes the development of the regional industrial economy. To complete the effective integration of the economy, ecology, culture, and society in the region, to replace traditional industries, ensure the virtuous cycle of the regional economy, and promote the improvement of the economic development of enterprises.

5. Conclusion

Promoting regional economic development is one of the main goals of China's economic development. Only in this way can we improve our economy in an all-around way, and industrial development can promote the growth of the regional economy and provide a strong guarantee for maintaining economic growth. It provides more employment opportunities for the labor force, actively transforms the regional administrative pattern, promotes the transformation of urban development, and provides the impetus for the healthy and orderly development of the regional economy, which can drive the development of the regional economy and provide favorable conditions for regional economic development. Regional economic growth can narrow the economic gap between the east and west and improve the overall economic level of China.

References

[1] Regional economy and industrial development [J]. Journal of Tianjin Sino-German University

- of Applied Sciences, 2020(02).
- [2] Xiao Fuchen. Analysis of the interactive relationship between industrial upgrading and regional economic development [J]. Knowledge Economy, 2019(22).
- [3] Zhang Xingmin. The influence of the rise and fall of pillar industries on regional economic development [J]. Cooperative Economy and Technology, 2019(11).
- [4] Luo Wenhua, Xue Yongjun. Evaluation of the evolution of regional pillar industries and development strategies--a case study based on Yunnan Province [J]. Academic Exploration, 2017(6): 88-92.
- [5] Pang Jing, Guo Huanhuan, Wu Tao. A review of research on the selection of regional leading industries in China [J]. Resource Development and Market, 2017, 33(2): 194-198.
- [6] Jiang Zhangxue. Analysis of the interactive relationship between industrial agglomeration and urban economic circle---Based on the perspective of new economic geography [J]. Business Economics Research, 2016(16): 201-203.