Internet innovation and entrepreneurship under the background of new and old energy conversion

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Abstract

The government should become the guide and supervisor of the cultural industry, at the same time, it should follow the market law and support the development of the cultural industry by legal and economic means. The greatest feature of China's current economic operation is the accelerated transformation of old and new kinetic energy. In the next few years, economic development is still facing greater downward pressure, some areas of risk will be accelerated release, economic difficulties and challenges will continue to increase. The conversion of new and old kinetic energy is an important measure to achieve healthy and sustainable economic development, is the key to solve the current economic and social development problems, is China's decisive move across the middle-income trap.

Keywords

New and old energy conversion; Internet; government; innovation; entrepreneurship.

1. Introduction

The conversion of new and old kinetic energy is an important measure to achieve healthy and sustainable economic development, is the key to solve the current economic and social development problems, is China's decisive move across the middle-income trap. In the future, we should give more play to the role of new kinetic energy, increase the proportion of new kinetic energy in the whole dynamic structure system, and rely more on new kinetic energy to achieve healthy and sustainable economic development. This paper explores the path of technological progress of the Internet, which drives the optimization and upgrading of the manufacturing structure, and empirically examines the impact of Internet technology on the restructuring of China's manufacturing industry through different paths using the manufacturing panel data of 24 regions from 2003 to 2016. It is found that the path of independent innovation based on the introduction of Internet technology can drive the optimization and upgrading of manufacturing structure, and it has the greatest impact. Therefore, it is the optimal path to drive China's manufacturing industry to achieve structural adjustment. However, this process may be accompanied by the trend of low value-added in high-end technology industries in manufacturing, and the impact of Internet technology progress on the restructuring of manufacturing industry has a time lag effect.

Strategic emerging industries can promote the transformation and upgrading of traditional industries while growing on the basis of traditional industries. There is a positive coupling and interaction between the two industries in the development. At the same time, they also closely form an organic coupling system . The development of the coupling system of the two industries can match the factors of production again, form new superior industries, speed up the transformation and upgrading of economic structure, improve international competitiveness, and promote the healthy development of the economy.

2. Literature review

The impact of technological progress on industrial structure change has always been the focus of attention of scholars at home and abroad. Relevant research results are relatively rich. Many scholars study the impact of technological progress on industrial structure adjustment based on the measurement of technological progress rate. According to Ngai and Paisarides (2007) [5], inter-departmental differences in total factor productivity (TFP) will promote industrial structure change, and if substitution elasticity between products meets certain conditions, labor share will shift to sectors with higher TFP growth rates. Cai Fang et al. (2009) [6] By calculating the TFP of six regions in China, it is found that labor-intensive industries can be continued to develop through the upgrading, transfer of industrial structure in coastal areas and industrial undertaking in central and Western regions. Quyu (2010) [7] Calculates the labor productivity of China's manufacturing industry from 2000 to 2007. The results show that upgrading and adjusting the structure of manufacturing industry is necessary to enhance the future labor productivity. Many scholars from China from the perspective of productivity growth, this paper studies the effect of technological progress on industrial structure upgrading (Li Xiaoping, Lu Xianxiang, 2007; Gan Chunhui, Zheng Ruogu, 2009; Qu Yong, 2013) [8-10].

It can be seen that most of the researches concerned focus on the industry segmentation or the micro perspective. There are also many scholars based on the industry as a whole, from the perspective of technological efficiency, technological choice and technological innovation. Chen Yong and Li Xiaoping used DEA method to decompose industrial technology into technological progress and technological efficiency, and found that technological progress is the fundamental way to optimize China's industrial structure. Huang Maoxing and Li Junjun used panel data from 31 provinces and municipalities in China from 1991 to 2007 to study the industrial structure optimization and upgrading. Yang Tianyu and Liu Hehe studied the change of industrial structure by constructing a balanced model. The results show that China should increase the proportion of producer services in the tertiary industry, which helps to improve the labor productivity of the tertiary industry, and then promote the upgrading of industrial structure. Fu Yuanhai and others analyzed the panel data of China's manufacturing industry from 1999 to 2012, and concluded that independent innovation based on the introduction of foreign technology is the best way to realize the restructuring of manufacturing industry. Based on the perspective of unbalanced growth, Anxin et al. found that compared with light industry, China's heavy industry has a higher rate of technological progress, which is one of the reasons for the upgrading of industrial structure. Huang Shao'an, through analyzing the transformation of new and old kinetic energy in Shandong's economic development, holds that Shandong Province needs to seek growth power from the dimension of industrial upgrading, which mainly relies on new technology to upgrade the existing industrial level.

As an important manifestation of technological progress, the literature on the impact of Internet technological progress on industrial restructuring is not rich. Miyazaki and others divided the use of Internet communication technology into four stages, and found that the impact of Internet communication technology on the labor productivity of various sectors will be strengthened over time, and the labor productivity differences between departments will promote the change of industrial structure. Gaputo et al.

Giudice explores the role of emerging Internet of Things (IOT) technologies in value creation, technological revitalization and industrial restructuring as the key to their application in manufacturing. Xiao Jinghua and others have studied the integration quality of the new generation of information technology and manufacturing industry, and found that Internet technology will have a profound impact on the mode of production, management mode and value chain of China's manufacturing industry, thus promoting the transformation and upgrading of industrial structure. Based on the survey data of Chinese manufacturing enterprises, Wang Juan found that "Internet +" increased the

productivity of capital and technology intensive enterprises, and promoted the optimization and upgrading of the manufacturing structure.

The existing literature seldom explores the path mechanism of the impact of Internet technology on the restructuring of manufacturing industry, and seldom analyzes the impact of Internet technology on manufacturing industry through different paths from the perspective of structural rationalization and height in theory.

3. Existing problems

3.1 Long term difficulties in increasing revenue

From the perspective of fiscal revenue, Heilongjiang Province and Liaoning Province have obviously rebounded against the background of sustained high international commodity prices and rapid growth of domestic resource prices. However, in the first three quarters of 2017, local fiscal revenue of Jilin Province decreased by 2%, County (city) income decreased by 10.9%, and 24 of the 39 counties (cities) in the province were down. County (city) negative growth, 13 counties (cities) revenue fell by more than 20%.

Fiscal revenue growth will still be more difficult in a quite long period of time. The growth rate of revenue will remain low and even appear negative growth. This is

It is determined by the long-term and arduous transformation of the old and new kinetic energy. First of all, the adjustment of industrial structure takes time. Although the development of new economy and new kinetic energy is pregnant with the outbreak, it is only a point-like breakthrough in some areas and industries, and has not yet formed a prairie power. For example, Heilongjiang's industrial structure is not reasonable, and it relies too much on resources development. Economic growth is heavily dependent on resources and heavy industry has a larger share. From 2004 to 2016, although the proportion of the added value of heavy industry in industries above the scale decreased year by year, it still accounts for about 80%. In addition, crude oil prices have fallen, although the coal market situation has been warming up, but still not out of the predicament, the impact on the industrial economy is greater.

First of all, the old and new energy conversion is not smooth, there is a risk of industrial discontinuity. The expansion of manufacturing and service industries has weakened, and the transformation of new and old industries is more difficult. Influenced by structural adjustment and capacity removal, the growth rate of industries with excess capacity, such as steel and coal, has slowed down significantly; the volume of strategic emerging industries is insufficient, although developing rapidly, but it is still difficult to fill the gap in the decline of traditional manufacturing industry.

Secondly, the enhancement of innovation ability takes time. Such as Heilongjiang province's independent innovation ability is weak, technology intensification degree is relatively low. enterprise Although we pay more attention to R & D, we still have insufficient innovation capability. According to the final accounting data, the research and development expenditure of state-owned enterprises' management cost in 2016 was only 330 million yuan, accounting for only 1.7% of the management cost.

Thirdly, it takes time for enterprises to improve their efficiency. For example, the labor cost of enterprises in Heilongjiang province remains high, which affects the economic efficiency of enterprises. Enterprises are mainly labor-intensive. With the increase of labor costs, the shortcomings of low efficiency, high cost and weak ability to resist market risks gradually appear. Taking Longmei Group as an example, 283,000 workers were registered at the beginning of the company's formation, and 171,000 workers were registered at the end of 2016. The labor cost accounted for nearly 43.4% of the total cost, which was 15% - 20% higher than the national key coal mines of the same kind.

3.2 Rigidity of expenditure burden

Influenced by the slowdown of economic growth, the increase of unemployed people, the slowdown of fiscal revenue and residents'income growth during the period of kinetic energy conversion, the proportion of rigid expenditure on wage, operation and livelihood Protection has increased significantly. In addition, as the gap between revenue and expenditure widens, the scale of government debt increases, and the burden of debt service rigid expenditure increases. The solidification of expenditure has brought tremendous pressure to finance. Once income problems occur, it is difficult to reduce expenditure, which easily leads to systemic risks involving all aspects of economy and society. In 2016, the debt balances of Heilongjiang Province and Jilin Province were 312 billion yuan and 289.6 billion yuan, respectively. The debt balances per capita were 8213 yuan and 10597 yuan, respectively.

4. Solutions

4.1 The government promotion mechanism which is coupled with each other.

Government promotion mechanism mainly acts on the initial stage of industry coupling: under the condition of market economy, the market plays a fundamental and leading role in the coupling development of strategic emerging industries and traditional industries. However, the market inevitably exists blindness and spontaneity, which requires the government to give full play to the role of macro-control and promotion. The government can guide and cultivate strategic emerging industries through administrative, legal, fiscal and other means. At the same time, the government should create conditions for industrial agglomeration, guide different micro-subjects to coordinate their actions, and construct effective incentive and restraint mechanisms to reduce the coupling barriers between traditional industries and emerging industries, so as to form a benign interaction and achieve mutual promotion and common development.

4.2 The superposition and amplification mechanism of the two coupling development.

The superposition and amplification mechanism mainly acts on the initial and growth stages of industrial coupling: the coupling between strategic emerging industries and traditional industries, through the four networks of talent, technology, market and information within the system, forms a material exchange and transmission system, promotes the coupling while promoting the sustained growth of the two industries. The formation and development of the system. The improvement of technology and profitability of a certain link or an enterprise in the coupling system will drive the technological progress of other links and other enterprises in the coupling system, thereby promoting the profit growth and ultimately improving the overall competitiveness of the whole coupling system. It can not only promote the development of traditional industries, but also cultivate and shape them. To become a more competitive emerging industry.

4.3 The linkage and integration mechanism developed by them.

The linkage fusion mechanism mainly affects the mature stage of industrial coupling. The coupling development of strategic emerging industries and traditional industries is essentially a process of linkage and integration of two industries: the strategic emerging industries bred in the traditional industries, the expansion of the scale and the continuous improvement of the degree of specialization, thus promoting the in-depth development of industries and promoting the decomposition of production processes, some of which will be transferred to Traditional industries, and in a specific region, form a strategic emerging industry-led, traditional industry-based industrial cluster system, and then promote the two industries in the industrial system, industrial elements, industrial structure, industrial layout and other aspects of the deep coupling and integration of development, and ultimately form a driving area The driving force of regional economy and social development.

5. Summary

In short, the coupling between strategic emerging industries and traditional industries is a highly related dynamic coupling between strategic emerging industries and traditional industries, relying on market mechanism and government promotion, through the flow of capital, technology, talent and other factors. In this dynamic coupling process, the power of the government and the market complement each other and play a common role. However, in different stages of industrial coupling, the role of government and market has different emphasis: as a whole, in the initial stage of industrial coupling, the government's role is mainly to build financing platform to resolve the capital bottleneck constraints of industrial coupling, to build technology research and development platform to resolve the technical barriers of industrial coupling, and to improve the talent policy to meet the industrial coupling. In the mature stage of industrial coupling, the role of the government should turn to establish and improve the market mechanism, cultivate intermediary service system, rely more on market forces to promote the depth of strategic emerging industries.

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