Research on Labor Standardization and Labor Pipelining Structure Reform on Supply Side of Industrial Chain

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Abstract. This paper analyzes the main problems and difficulties faced by private enterprises in upgrading and upgrading in our province and explores the countermeasures for effectively accelerating the transformation and upgrading of private enterprises through several field investigations inside and outside the province. This paper focuses on the Research on labor standardization and labor pipelining structure reform on supply side of Fujian industrial chain. After thorough investigation and analysis, the research group put forward several feasible schemes.

1. Introduction
Private enterprise holds the balance in Fujian economy position. After years of development, private enterprises in Fujian have undergone great changes in their management system and operating mechanism, which have greatly improved their vitality and competitiveness. Under the new normal, there are still many institutional, institutional, structural and historical problems that private enterprises need to further solve and they are becoming increasingly difficult. In the macro environment where the new round of scientific and technological revolution and the transformation and upgrading of China's manufacturing industry form a historic intersection, Fujian, as one of the most active regions for private enterprises in China, must seize the historical opportunity, give full play to its advantages, transform and upgrade in an all-round way, and stride into the ranks of the strong manufacturing provinces in China.

Through several provincial surveys and cross-provincial studies, the research group visited several typical private economic regions and their successful enterprises, explored their successful development experience and regional policy advantages, and put forward some countermeasures to accelerate the transformation and upgrading of private enterprises. Through investigation, the research group found that private enterprises in our province are facing problems in the new normal of economic development on private enterprises many impact; Through in-depth analysis and research, the research group puts forward the corresponding countermeasures, that is, accelerate the supply-side structural reform, and strive to provide beneficial policy advice and Suggestions for accelerating the transformation and upgrading of private enterprises in our province.

In this paper, the authors research into the comprehensive curriculum reform of intelligent manufacturing in colleges and universities serving local areas. It is supported by the achievements of some projects, such as the “Introduction to E-Commerce’ Provincial Quality Open Online Course Project” (Project Number: QZTCJWC20180103) which is funded by the education department of Fujian province, the “Overseas Visiting Scholar Program of Fujian Province Academic Leaders
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This paper, which lays emphasis on the current situation of Economic development in FuJian, holds that there is an imbalance in the allocation of social production resources, and gives the research results on the supply-side labor standardization and labor pipelining structure reform of FuJian industrial chain. The overall organization of The paper is as follows. After The introduction, in Section II we present The current situation of Economic development in FuJian, And it lists a lot of data and charts, the team thinks FuJian industrial chain need adjust supply side factors are clarified in section III. In section IV, the research group suggested that the government take some measures to adjust the factors on the supply side. Supply side labor standardization; Supply-side labor pipelining; Specialization of supply-side labor; Theory and practice of the supply side of the further research, such as measures was put forward and carry out in detail. Finally, Section V concludes the paper.

2. Current Situation of Economic Development in FuJian

In 2018, the GDP of FuJian reached 3,580.404 billion yuan, an increase of 8.3 percent or 0.2 percentage points over the previous year in comparable prices. By sector, the added value of the primary industry was 237.982 billion yuan, up 3.5%; The added value of the secondary industry was 1,723.236 billion yuan, up 8.5%; The added value of the tertiary industry was 1,619.186 billion yuan, up 8.8%.

In 2018, the added value of industries above the designated size in the province increased by 9.1 percent or 1.1 percentage points over the previous year. The value added of light industry increased by 8.9 percent and heavy industry by 9.2 percent. By type of registration, the added value of state-owned enterprises increased by 7.8 percent, joint-stock enterprises by 10.3 percent, joint-stock cooperative enterprises by 14.4 percent, and enterprises with foreign investment and investment from Hong Kong, Macao and Taiwan by 6.9 percent. The value added of the mining sector grew by 7.8 percent, the manufacturing sector by 8.9 percent, and the power, heat, gas and water production and supply sectors by 11.9 percent. However, under the background of the us-china trade war, our province is faced with the new normal of intensified market competition, traditional overcapacity, strengthened resource and environmental constraints, and rising cost of factors, the development of our manufacturing industry is also faced with severe challenges, and the transformation and upgrading is urgent.

Figure 1. Total GDP of FuJian province and its growth rate from 2013 to 2018
(The data are from the China Business Industry Research Institute database)

Figure 2. The proportion of added value of the three industries in GDP of FuJian province from 2013 to 2018
(The data are from the China Business Industry Research Institute database).

The number of small and medium-sized enterprises in China accounts for more than 99% of the total number of enterprises in the country. They are the fresh force of China's economic development
and play an important role in promoting economic growth, relieving employment pressure and maintaining social stability. FuJian province, especially FuJian minnan area, is one of the most active places for the development of private enterprises in China. In the past 40 years since the reform and opening up, the number and scale of private enterprises in FuJian have been growing rapidly year by year. Private enterprises have become one of the main driving forces for the economic development of FuJian, especially in southern FuJian.

In 2018, the ex-factory price of industrial producers in the province rose 2.8 percent, or 1.3 percentage points less than that of the previous year. December was up 2.4% from a year earlier and down 0.6% from a month earlier. In 2018, the purchase prices of industrial producers rose 2.8 percent year-on-year, or 2.5 percentage points less than the previous year. December was up 1.2% from a year earlier and down 1.0% from a month earlier.

However, due to many natural defects of private enterprises in capital strength, development strategy, management and technology upgrading, market expansion, etc., the abnormal death and shortened survival period of private enterprises has become a new normal in the development process of China's private economy. In recent years, China's economic development and growth mode will have a major change in the macro background, private enterprises in the low industrial quality is a private enterprise in the process of development is more prominent and urgent to solve the problem.

Our research group investigated a large number of private enterprises in FuJian, and found that currently private management methods are generally backward, there is a shortage of truly competent management talents, professional managers and enterprise owners have a low degree of mutual trust, and family management and paternalistic management methods are still common. Many small and medium-sized private enterprises complain that a small number of enterprises collude with officials and businessmen to use unfair means of competition to achieve abnormal development. In recent years, private enterprises in our province, especially small and medium-sized private enterprises, generally suffer from financing difficulties and lack of development momentum. Many small and medium-sized private enterprises are weak in resisting risks and look forward to group development.

3. FuJian Industry Chain is in Urgent Need of Supply-side Factor Adjustment

Under the new economic situation, many economically active areas in Haixi, especially private enterprises in FuJian, are undergoing the adjustment of industrial structure in terms of "numerical control generation transformation", production automation transformation and product structure adjustment. They are faced with problems such as overstuffed management and shortage of high-quality labor force, and are in urgent need of supply-side labor factor adjustment.

"Numerical control generation" demonstration project in our province is to implement the "national medium and long-term science and technology development plan outline (2006-2020)", promote the popularization and application of numerical control technology in China and continuous innovation, promote the application of mechanical product innovation, science and technology jointly launched the relevant unit "numerical control generation of mechanical product innovation application demonstration project" (hereinafter referred to as "demonstration project"). At the same time, established the leading group "demonstration project", the ministry of science and technology as a leader of the unit, the ministry of industry and information technology, Chinese academy of engineering, respectively, as deputy head of the unit, the national development and reform commission, the ministry of education, the national standard committee, China machinery industry federation, China light industry federation, China textile machinery equipment industry association and other departments as members of the unit.

Combined with the status quo of China's economic development, on the basis of theory for several years research, central time put forward the strategy of the "supply side structural reforms" to emphasize in moderately expand aggregate demand at the same time, make greater efforts to promote economic structural reform in, focus on strengthening the supply side structural reforms, strive to improve the quality of the supply system and efficiency of the supply system is more adapt to the change of demand structure, make the supply side and demand side to reasonable matching, enhance
the sustained growth momentum. Supply-side considerations have existed since ancient times, from pre-qin manufacturing standardization, Whitney's standardized production to Ford's assembly line production, history has proved the prominent role of supply-side labor standardized design and specialized division of labor.

Under the trend of industry 4.0, the functions of workshop in manufacturing enterprises gradually transition to branch factory system. When the task of workshop cannot be completed, a virtual workshop can be formed by directly seeking partners online through the network. On the other hand, the workshop level can also directly accept the production tasks of other workshops or enterprises as part of the virtual workshop or enterprise of other enterprises. Digital factory internal ERP, CRM, SeCM, SCM, product data management (PDM) and DRP module building and integration, in view of the new production management methods and process improvement, in the service of digital, intelligent, so in the new era under the background of the labor supply side great changes of structure has been or is about to happen and the corresponding labor supply side standardization reform and supply side streamline structure reform is imperative. Under the trend of new industry, manufacturing alliance member enterprises carry out business activities according to certain rules and build a dynamic supply-side cluster. The members of the cluster conduct trade and cooperation according to the market rules and jointly complete the production and sales tasks from the external market. This is a cooperative game process.

The new normal of modern industrial development, driven by orders and benefits, enables enterprises to actively transform into members of the system after joining, and carry out reform in accordance with the operation access and output standards of the platform. Digital factory to help enterprises in the production, sales, decision-making, financial, personnel and storage aspects of standardization, efficiency, information management, the introduction of industry advanced management mode, provide cooperation, sales orders, raw material supply cooperation, after-sales service, warehousing transportation services such as cooperation, financial cooperation and market analysis and decision. Member enterprises of the platform can focus more on what they are good at and leave other work to more specialized enterprises to form a specialized dynamic supply-side cluster with dynamic members.

4. Labor Standardization on the Supply Side of FuJian Industrial Chain and Labor Pipelining Structural Reform

The digital factory construction of FuJian small and medium-sized enterprise cluster can effectively solve the disadvantages of limited resources and closed information of domestic manufacturing enterprises. Firstly, the "numerical control generation" framework of cross-enterprise and cross-regional industry will be constructed respectively, and finally the comprehensive industry 4.0 system will be built into cross-regional and cross-industry. This mode of supply chain assistance is especially conducive to integrating small and medium-sized enterprises in FuJian, enabling them to move quickly from automation to information and agility, and to cope with changes in the international trade environment with the collective power of regional industrial clusters.

We believe that for different enterprises, there will be a large number of non-core businesses that can be divided, and these non-core businesses are usually inefficient compared with professional companies, which greatly affects the operating entity's work efficiency and profit space, weakens the main business ability and increases the power space. Distinguishing between main business and non-main business, distinguishing between efficient business and inefficient business, gradually separating inefficient business from non-main business, and keeping efficient business while separating inefficient business can greatly reduce the burden on enterprises, improve the quality of enterprise development and promote the upgrading and transformation of enterprises.

Therefore, labor supply side structure reform oriented "standardization of labor supply side" and "labor supply side assembly line" of private enterprises in our province, even by state-owned enterprises, institutions, government departments which promote the efficiency of ascension, the supply side of the industry under 4.0 labor structure reform will reduce labor cost, largest promote
supply side assembly line of the third industry development, the new growth point for the economy in China.

According to the research, the research group proposes to adjust the supply-side factors of private enterprises in our province from a macro perspective:

Firstly, about the standardization of supply-side labor operations. Enterprises, public institutions, government departments have a large number of non-confidential work can be standardized, these businesses are mainly other business outside production, such as sales management, procurement management, financial management, personnel management and some administrative services including window services and so on. In the past, these businesses were an integral part of the business of an enterprise or an administrative department, a part that the operating entity had to own. But these jobs are not the key business of the unit, but also cost a lot of manpower and material resources, because not specific and inefficient. Standardization of the common work of these various units will facilitate further unified management in the future.

Secondly, supply-side labor is streamlined. For different enterprises, there will be a large number of non-core businesses that can be divided, and these non-core businesses are usually inefficient compared with professional companies, which greatly affects the operating entity's work efficiency and profit space, weakens the main business ability and increases the power space. Distinguishing main business from non-main business, distinguishing efficient business from inefficient business, gradually separating inefficient business from non-main business, keeping efficient business while separating inefficient business can greatly reduce the burden on small and medium-sized private enterprises and gradually get on the right track. (for example, in the past, the financial department of a branch company was necessary, because of the distance between different regions, it was impossible to report the income and expenditure to the head office one by one, so there were financial departments in different regions of the group company and even in different branches in the same region. However, with the development of information technology, each branch company can completely use the information system to make unified account reporting and accounting of the group. Only the financial department of the group company is retained, a large number of personnel and expenses are cut down, and at the same time, the growing soil of corruption is greatly reduced. Even further, the division of these operations to the relatively efficient professional financial companies to do, further reduce the internal administrative costs. Specialized companies are like a link in an assembly line. If money management can be done, so can other non-core businesses. Now that companies can do this, the time is ripe to extend it to public institutions and government departments as well.

Thirdly, the supply side labor specialization, encourages the development enterprise operation specialized service industry. Promote the supply side of the line of professional service industry (mainly for the third industry), so that zombies will originally inefficient but expensive department subdivision, such as after-sales services, accounting services, consulting services, procurement service, planning, design, production services, human resources service, personnel management, equipment management, health management service, charge service, window services, logistics services, storage service, and all kinds of enterprise internal management, file service, information service and so on. More policy incentives will be provided to these emerging supply-side assembly lines (tertiary industries).

Fourthly, the more in-depth supply-side theory and practice research on private enterprises in our province should be put on the agenda as soon as possible.

A) research on supply-side labor standardization reform

Under the trend of new industry, the management mode will change from hierarchical to flat, and the traditional enterprise organization can no longer satisfy the information management of agile manufacturing unit. Due to the production order is no longer a top-down conveying process, but driven by orders to arrange their production task, at this time the supply side of Labour structure has changed, so it is entirely possible to standardized reform of Labour elements from all walks of life, in
the business content, the form of service, business process, personnel quality requirements, and make compensation range of standardized specifications.

B) supply-side labor pipelining design in the era of industry 4.0

Under the trend of new industry, the function of workshop in the manufacturing enterprise gradually to the branch factory system transition, when the task of workshop cannot be completed, can directly through the network to find partners on the Internet, constitute a virtual workshop; On the other hand, the workshop level can also directly accept the production tasks of other workshops or enterprises as part of the virtual workshop or enterprise of other enterprises. Agile manufacturing utilizes modern network advantages to improve business processes, reduce product costs and shorten production cycles.

C) market research on supply-side labor assembly line links

Under the trend of new industry, cooperative relationship is the link to maintain the whole supply-side labor assembly line, and the establishment of stable and appropriate cooperative relationship is an important guarantee for the success of supply chain operation. In supply chain management, the cooperation mechanism of joint competition and common profit is especially emphasized. Therefore, the marketization of inefficient operations in supply-side labor factors is likely to be an effective means to improve the overall efficiency, clean up zombie enterprises, eliminate backward production capacity, improve competitiveness and promote economic development.

5. Conclusion

In this paper, a Research on labor standardization and labor pipelining structure reform on supply side of FuJian industrial chain was presented. Specifically, the current situation of Economic development in FuJian was introduced. In addition, the impact of the new normal of economic development on private enterprises. The problems of rising labor cost, heavy tax burden, financing difficulties, high logistics cost and high institutional transaction cost are becoming the current troubles of private enterprises. After in-depth investigation and analysis, the research team proposed several measures, including: standardization of supply-side labor operations; Supply-side labor pipelining; Specialization of supply-side labor; More in-depth supply side theory and practical research and other corresponding solutions.

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