International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor (2018): 7.426

Research on the Impact of Industrial Finished Goods Export on China's Wage Level

Jiajing Jia

Xidian University, School of Economics and Management, XiFeng Road, Xinglong Section 266, China

Abstract: ***Along with the rapid development of export trade, our country also changes profoundly in the labor market. As the main export trade in our country, the research on the influence of the export to the manufacturing wages has important significance to understand the status of the income distribution and promote economic growth in our country. Manufactured goods exports impact on the manufacturing average wages by four transmission mechanisms. This article selects the manufactured goods exports, R&D spending, total labor productivity of manufacturing industry and PPI as explained variable to study the influence of export to the manufacturing wages, we concluded that the first three variables for manufacturing wages all have positive influence, the PPI negatively correlated with it. To this, this paper puts forward some suggestions.***

Keywords: Manufactured goods; Exports trade; Manufacturing wages; Panel data model

1. Introduction

Since the reform and opening up, along with the process of global economic integration, the influence of international trade on the development of China's national economy has continued to deepen. Foreign trade, especially export trade, has achieved remarkable development in all aspects. In general, the volume of export trade is still at a relatively high level. Over the past 20 years, the export growth trend of China's industrial manufactured goods and total commodities has been basically synchronized, and the growth rate has remained basically the same. Therefore, it can be roughly judged that China's exports are basically dominated by industrial manufactured goods exports. of. However, with the advancement of the trade liberalization process and the rapid changes in the domestic and international economic situation, China's manufacturing industry is at a new turning point. Cheap labor resources and foreign direct investment cannot permanently support the growth of exports.

At the same time, the rapid development of international trade has also brought about an inevitable impact on China's labor market. China is the most populous developing country in the world, and employment has always been a long-standing topic. As a developing country with relatively abundant labor factors, according to the H-O and S-S theorem, foreign trade will increase the actual income of the owner of a country's abundant elements, while reducing the actual income of the owners of scarce factors, industrial exports will lead to The relative increase in labor compensation in China. So, in fact, do ordinary workers fully enjoy the benefits of the rapid development of export trade? In other words, can we raise the wage level of workers by exporting our labor-intensive industries with comparative advantages, as the classic international trade theory suggests? The answer to this question will undoubtedly help us to comprehensively evaluate the role of foreign trade in China's economic development, especially the impact on income distribution.

2. Domestic and Foreign Literature Review

Throughout the domestic and foreign literature research related to the topic of this article, taking SS theory as the starting point, the theoretical expansion mainly includes the self-selection effect and export learning effect proposed by Bernard et al.[1], the heterogeneous enterprise heterogeneous laborer model proposed by Yeaple. Etc. These theories are the basis for the transmission mechanism that affects wages. In terms of empirical research, many scholars have used empirical data from different countries and regions to study the applicability of basic theories under various national or various control conditions by different methods and angles. Most of the research results at home and abroad have confirmed the existence of export wage premium, that is, the income of laborers in export enterprises is higher than that of non-export enterprises.

Some foreign scholars have used the matching data of enterprises and workers and found that there is no significant export wage premium after controlling individual employees of enterprises[2]. This shows that the export wage premium is partly due to the reconfiguration of different human capital between export and non-export enterprises. There is no such research in our country due to the lack of individual data on employees. The research of micro-enterprises by Chinese scholars is mostly based on the database of Chinese industrial enterprises[3]. However, due to different research ideas, different data processing methods, different model settings, etc., the conclusions of inconsistency and even contradiction are obtained. This article will further enrich the research in this field, hoping to get more accurate and valuable conclusions.

3. The mechanism of the impact of industrial manufactured exports on China's wage level

According to relevant economic theories and China's actual situation, this paper concludes that international trade affects wage levels through four channels: commodity price

effect, labor productivity effect, labor supply and demand effect and technological progress effect.

3.1 Commodity price effect

The S-S theorem proves that the price increase of a commodity causes the price of the intensive use factor of the product to rise relative to other factors, that is, the commodity price transmission mechanism that affects wages.

China has a comparative advantage in the labor force. According to the H-O theory, it is more inclined to export labor-intensive products in foreign trade. The continuous development of trade liberalization has brought a vast overseas market for Chinese enterprises, and the prices of similar commodities in developed countries are higher than the prices of products produced in China. Both of them have increased the demand for products in the industry, and the prices of industrial products have risen. The price of the labor factor used will also rise relatively, so the wage level of labor-intensive industries will increase.

3.2 Labor productivity effect

Foreign trade exports can promote the improvement of labor productivity, and the impact of export trade on wage levels can also be transmitted through labor productivity. In a perfectly competitive market, an increase in labor productivity leads to an increase in the marginal product of labor, which in turn leads to a corresponding increase in wages.

Trade and its liberalization have led to an increase in the labor productivity of developing countries, while the negotiating position of workers has also improved. At this time, the labor productivity effect can be seen as a correction to the previous wage distortion. This effect will have a greater impact on those companies with lower labor productivity, worse worker negotiating status, and more severe wage distortions. The same productivity increase will cause employees in these enterprises to have higher wages than other companies.

3.3 Labor supply and demand effect

3.3.1 Labor demand

Foreign trade can affect industry wages through changes in the number of products imported and exported that affect labor demand in different industries. Since China is a country with abundant labor, according to comparative advantages, China's labor-intensive products are lower in the international market, and the demand in the international market is increasing, resulting in an increase in product prices. Labor-intensive industries will expand output in order to meet With greater output and exports, labor demand in labor-intensive industries increases, and thus wages in the industry increase [4].

Technological progress mainly affects China's labor demand through two kinds of technology spillovers and technological innovations, which in turn affects the industry's wage level. When the technological progress began to spread within the industry and on a large-scale application, the demand for high-skilled labor in the domestic production sector also experienced structural growth, which further increased the average wage of capital-intensive industries.

3.3.2 Labor supply

Export trade affects a country's wage level by improving a country's education level and return on education. The expansion of export trade has led to an increase in the level of education, and the increase in the supply of highly skilled workers has led to an increase in wages for workers. At the same time, the expansion of export trade has led to an increase in the rate of return to education, thereby encouraging workers to improve their education, increase investment in human capital, increase the supply of workers with high education levels, and increase wages for workers.

3.4 Technological advancement effect

Export trade can not only directly affect workers' wages, but also indirectly affect wages by changing the technological level of a country. Driffield and Taylorpointed out that international trade itself will bring about technological progress, and therefore need to distinguish between technological progress brought by international trade and independent technological progress. We call it endogenous technological progress and exogenous technological progress, respectively. This article mainly examines the former. The endogenous technological advancement mainly comes from the R&D investment of the R&D department, which is generally manifested in three forms: the increase of new product categories, the improvement of new product quality and the improvement of factor productivity. The way and extent of a country’s participation in international trade will affect its technological progress. Export trade will cause resources to be released by the production sector and used by research departments, thus contributing to technological progress.

3.5 Comprehensive review of various effects and correlation analysis

The channels through which export trade affects wage levels are very rich. The above five effects are not independent but interact. Opening to the outside world promotes technological innovation. Technological advancement will have an effect on labor productivity in the industry. At the same time, it will affect the changes in labor demand, and then the wages of the industry will be changed through the labor demand effect. The changes in the labor factor returns generated by labor supply and demand will also affect the industry. product price. The development of trade liberalization has led to continuous reform and improvement of the country's institutional construction, so that changes in labor compensation can normally reflect the improvement of labor productivity and

technology in the industry. Whether the effects of various effects in reality are consistent with theoretical derivation needs to be verified through empirical research.

4. Empirical study on the impact of industrial manufactured exports on wage levels

4.1 Variable Selection and Model Construction

In order to carry out the empirical analysis of the impact of industrial manufactured exports on China's wage level, this paper uses the average manufacturing wage as the explanatory variable when constructing the econometric model, and uses W to indicate that the average wage level of a country's manufacturing industry is a multi-faceted factor. The result of the combined effect. Taking into account the availability of data, this paper will explain the variables set as follows: industrial manufactured exports (E), R&D expenditures (I), manufacturing full labor productivity (R), industrial producers ex-factory price index PPI (P).

Based on the above explanation of the explanatory variables and the explained variables, the econometric model of the empirical analysis is set as follows:

$W_{it} = \alpha + \alpha_i + \beta_1 E_{it} + \beta_2 I_{it} + \beta_3 R_{it} + \beta_4 P_{it} + u_{it}$

4.2 Regression estimation results and analysis

After the Hausman test and F test on the panel data samples, the model is set as the fixed effect variable intercept model, and the least squares estimation of the equation is performed by the section weighting method. The following is the regression estimation result of the fixed effect variable intercept model, as shown in Table1.

As can be seen from the above table, the export value of industrial manufactured goods, R&D expenditure and the total labor productivity of the manufacturing industry have a positive impact on the wage level of the manufacturing industry, and the export value of industrial manufactured goods has the greatest impact on the wage level of the manufacturing industry. R&D expenditure times As a result, the productivity of all employees in the manufacturing industry is less affected. More specifically, the coefficient of the explanatory variable P is estimated to be negative, indicating that the industrial producer's positive ex-factory price has a negative impact on the manufacturing wage level. According to the output, the estimated results of the fixed-effect variable intercept model are as follows:

$W_{it} = -2.9348 + \alpha_i^* + 0.6338 LnE_{it} + 0.2214 LnI_{it} + 0.1564 LnR_{it} - 0.0066 P_{it}$

Fixed Effects (Cross) gives the deviation of therate of change of manufacturing spontaneous wages in 31 provinces and provinces relative to the national average wage rate (ie constant C), which is used to reflect the manufacturing between 31 provinces and cities. The difference in the rate of change in the level of spontaneous wages. It can be calculated that the sum of the deviations of the self-income wages of the 31 provinces and provinces in the manufacturing sector is 0. The rate of change in the spontaneous wages of the manufacturing industry in Beijing is -3.2937 (=-2.934752-0.358945), For each province and city, they can get the rate of change in their manufacturing wages, as shown in Table 2.

Table 2 Rate of change in the level of spontaneous wages in manufacturing industries in various provinces and cities. It can be seen from the above table that although the marginal effects of the explanatory variables are assumed to be the same, there are still large differences in the rate of change in the spontaneous wages of manufacturing in the 31 provinces and municipalities.

Table 1: Regression estimation results of fixed effect variable intercept model

variable	C	lnE	lnI	lnR	P
Regression coefficients	-2.934752	0.633813	0.221377	0.156445	-0.006601
Standard deviation	0.293835	0.030354	0.016143	0.021968	0.000476
t statistic	-9.987761	20.88061	13.71335	7.121376	-13.86866
Prob.	0.0000	0.0000	0.0000	0.0000	0.0000
Statistics weighted by section					
R2 statistic		0.986849	Mean of the interpreted variable		16.22584
Adjusted R2		0.984392	Standard deviation of the interpreted variable		6.347209
Standard error of regression function		0.06664	Sum of residuals		0.808245
F statistic		401.6705	DW statistic		1.585354
Prob.（F）		0.0000			
Unsectioned weighted statistic					
R2 statistic		0.956327	Mean of the interpreted variable		10.41763
Sum of residuals		0.946565	DW statistic		1.185438

Table 2: Rate of change in the level of spontaneous wages in manufacturing industries in various provinces

Beijing	-3.2937	Shanxi	-2.44996	Chongqing	-3.02861
Tianjin	-3.4102	Inner Mongolia	-2.22201	Sichuan	-3.41147
Hebei	-3.55843	Jilin	-2.05041	Guizhou	-1.5693
Liaoning	-3.84355	Heilongjiang	-3.08261	Yunnan	-2.37393
Shanghai	-4.25346	Anhui	-3.13016	Xizang	-0.1499
Jiangsu	-5.19698	Jiangxi	-3.2327	Shaanxi	-2.49466
Zhejiang	-4.87974	Henan	-3.39931	Gansu	-1.35336

Fujian	-4.17237	Hubei	-3.3104	Qinghai	-0.36295
Shandong	-4.75777	Hunan	-2.8108	Ningxia	-1.04908
Guangdong	-5.54072			Xinjiang	-2.57694
Guangxi	-2.80174				
Hainan	-1.21013				
Average	-3.9099		-2.85426		-1.83702

4.3 Empirical research conclusions

Through the regression analysis of panel data of 31 provinces and cities in 2008-2014, the following conclusions were obtained:

The export of industrial manufactured goods has an impact on the wage level of the manufacturing industry through direct and indirect effects, and there is still a big difference in the rate of change in the level of spontaneous wages in manufacturing industries in various provinces and cities. According to the results of the regression analysis of each region in the previous section, we can know that the export of manufactured goods directly affects the wage level of the manufacturing industry and has a significant positive effect. Therefore, the expansion of export trade has a significant impact on the rise of manufacturing wages. The indirect effects on the average wage change in the manufacturing industry include the impact of R&D investment, the impact of manufacturing labor productivity, and the impact of industrial producers' ex-factory price indices. R&D investment is an important indicator to measure the progress of science and technology. Through empirical analysis, it can be known that the increase in R&D expenditure will bring about a large increase in the wage level of the manufacturing industry, reflecting the importance of technological progress in increasing the wage income of workers. The productivity of all employees in the manufacturing industry also has a significant positive effect on the wage level of the manufacturing industry. Unlike the hypothetical expectation, the ex-factory price index of industrial producers has a negative impact on the wage level of manufacturing in the region. The possible reason is that the export of capital-intensive products of industrial manufactured goods in China is increasing, and the price of capital elements passes through Jones. The expansion effect has risen sharply, and the price of the corresponding labor factor has been restricted, which in turn has led to a decline in wage levels.

5. Conclusion

The export of industrial manufactured goods affects the average wage of the manufacturing industry through four kinds of transmission mechanisms: commodity price effect, labor productivity effect, labor supply and demand effect, and technological progress effect. The export of industrial manufactured goods has an impact on the wage level of the manufacturing industry through various functions, and the rate of change in the spontaneous wage level of manufacturing industries varies greatly among provinces and cities.

In order to achieve economic sustainability and harmonious development of society, China's reform is imperative. First, we must adjust the export-oriented economic development strategy, optimize the trade structure and trade mode, guide enterprises to improve product quality, improve product competitiveness, and achieve diversified development of product market and trade market. Second, enterprises must strengthen technological transformation and Upgrading, for technological spillovers in export trade, must have positive export learning behaviors, and at the same time strengthen independent innovation, increase R&D investment, and increase labor productivity. Third, the government must establish and improve labor rights protection mechanisms and improve the production factor market mechanism. To correct the distortion of labor compensation and ease the contradiction between labor and capital; Fourth, we must vigorously develop education and vocational training, strengthen the investment in basic education and vocational training for skilled workers, and upgrade the skills of workers, so that the demand for high-tech personnel is tense. The phenomenon will be relieved, and the low-skilled labor force will have sufficient reserve power.

References

[1] Bernard A, Redding S, Schott P. Comparative and Heterogeneous Firms [J]. Review of Economic Studies, 2007, 74:31-66.
[2] Munch J R, Skaksen J R. Human Capital and Wages in exporting firms [J]. Journal of International Economics, 2008, 75:363-372.
[3] Lu Shuangshuang. The impact of China's manufacturing enterprises' exports on wage levels [D]. Fudan University, 2014: 8-12.
[4] Jiang Yeheng. The Impact of Trade Liberalization on Wages: China's Experience [D]. University of International Business and Economics, 2014: 20-42.