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Research on the Impact of Trade Convenience on Export Performance of Manufacturing Enterprises in Jiangsu Province

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Abstract**—** *In order to move from a big manufacturing country to a strong manufacturing country, China must not only make its domestic market bigger and stronger, but also strive to enhance the international influence of Chinese manufacturing and allow Chinese manufacturing companies to go global. Taking the manufacturing enterprises in Jiangsu Province as the research object, this paper uses panel data regression to study the impact of trade convenience of various cities in Jiangsu Province on the export performance of local manufacturing enterprises. The analysis found that, in the long run, improving the city's trade convenience has a significant role in promoting the export performance of manufacturing enterprises. Finally, relevant policy recommendations are given on the development of the manufacturing industry and the improvement of the export performance of manufacturing enterprises*.

Keywords**—** *Trade convenience; manufacturing enterprises; export performance; panel data regression*.

I. INTRODUCTION

Affected by unfavorable factors such as the new crown pneumonia epidemic and the large fluctuations in crude oil prices, the global economy has become more uncertain, and countries are facing varying degrees of downward economic pressure. In this context, trade frictions among countries have intensified. The Party Central Committee reviewed the current situation and looked forward to the future, and proposed "to build a new development pattern with domestic and international double cycles as the main body." In order to build a "double-cycle" new development pattern, we must unswervingly adhere to the strategy of a strong manufacturing country. Speeding up the transformation and upgrading of the manufacturing industry and comprehensively improving the development quality and core competitiveness of my country's manufacturing industry will be important goals to be completed at this stage. The development quality and core competitiveness of the manufacturing industry include innovation capabilities, brand building, green manufacturing, structural optimization, and international influence. The government can encourage innovation, adjust the manufacturing industry structure, create well-known manufacturing brands, and promote manufacturing. Leading the development of the manufacturing industry in a variety of ways, including industrial exports. This article takes the manufacturing enterprises in Jiangsu Province as an example, and focuses on the impact of the trade convenience of each city in Jiangsu Province on the export performance of local manufacturing enterprises.

II. SUMMARY OF RELATED RESEARCH

(1) Research on the level of trade convenience

The first method is to score the many fields and corresponding sub-fields involved in trade convenience. Wilson et al. (2003) used Transparency International and World Economic Forum and other relevant data to score and calculate their respective comprehensive indexes in the four areas and corresponding sub-fields of the efficiency of Hong Kong and Japan, the customs environment, the regulatory environment, and the use of e-commerce. Understand the trade convenience of various countries. The second method is to select representative variables as the proxy variables of trade convenience to study the economic effects of trade convenience. For example, Wang Rong and Li Bo (2015) used port efficiency and 20-inch containers to leave the exporting country with official levies. The cost of exporting a commodity, the number of signatures required to export a commodity, and the number of days required to export are used as proxy variables of trade convenience to study its economic impact.

(2) Related research on export performance

Major domestic and foreign scholars mainly use single index and composite index as the evaluation standard of enterprise export performance. At present, the main measurement methods of composite export performance indicators include analytic hierarchy process, multiple regression analysis and structural equation model. Madsen (1989) believes that there are three main factors affecting export performance: environment, organization, and strategy. Therefore, export performance mainly includes three dimensions: change, sales, and profit.

(3) Relevant research on the impact of trade convenience on the export performance of manufacturing enterprises

It is rare to study its impact on the export and performance of enterprises from the perspective of trade convenience, and more research is carried out from the perspective of trade liberalization. Early studies were mostly carried out under the framework of the new trade theory, and more focused on the impact of trade liberalization on industry productivity. Tybout and Westbrook (1995) used Mexican manufacturing data from 1984 to 1990 to study the impact of trade liberalization on industry productivity. The study found that trade liberalization

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improved industry productivity by reducing costs. Later, as Melitz (2003) and Bernard (2003) expanded the research of Krugman (1980) and Dombus et al. (1977) respectively, and created the "heterogeneous firm trade theory", they both emphasized the impact of firm heterogeneity on international trade. The importance of. In a closed economy, trade liberalization will affect enterprises' entry and exit from the market (selection effect), thereby shifting resources from low-efficiency enterprises to high-efficiency enterprises, increasing the productivity of corresponding enterprises; under an open economy, they all believe that trade liberalization It will reduce the cost of trade, thereby reducing the critical export productivity of enterprises and increasing the possibility of enterprises' export.

III. Variable Setting, Data Sources and Empirical Analysis

(1) Construction and selection of main indicators

1. The explained variable. The explained variable in this article is the export performance of manufacturing companies. This article measures the export performance of manufacturing enterprises from three aspects: export scale, export structure, and export efficiency. The export scale includes two secondary indicators: the export density of each city in Jiangsu Province and the export proportion of each city in Jiangsu Province; the export structure includes the export proportion of the manufacturing industry of each city in Jiangsu Province, the export proportion of primary products of the manufacturing industry of each city in Jiangsu Province, and Jiangsu There are three secondary indicators for the export proportion of manufactured industrial products in the manufacturing industries of the provinces and cities; the export efficiency includes two secondary indicators: the growth rate of the manufacturing exports of each city in Jiangsu Province and the contribution of exports to the GDP of each city in Jiangsu Province. The analytic hierarchy process is used to calculate the weight of each secondary index, and the weighting is used to obtain the export performance index of manufacturing enterprises in each level of Jiangsu Province.

2. Core explanatory variables. The core explanatory variable of this paper is the trade convenience of each city in Jiangsu Province. This article divides the trade convenience of various cities in Jiangsu Province into five dimensions: economic and financial foundation, transportation infrastructure, legal environment, customs efficiency, and electronic informatization. Among them, the economic and financial basic dimensions include four secondary indicators: the growth rate of regional GDP, the growth rate of employment in the secondary industry, the growth rate of manufacturing loan balances, and the growth rate of public finance expenditures; the transportation infrastructure dimensions include the growth rate of highway mileage, There are five secondary indicators: road freight volume growth rate, water freight volume growth rate, port cargo throughput growth rate, and express volume growth rate. Use the principal component analysis method to synthesize the corresponding dimension vectors of the secondary indicators, use equal weights, calculate the Euclidean distance between each dimension, and calculate the Chebychev distance between each dimension. The city's trade convenience indicators.

3. Control variables. This article selects the manufacturing asset-liability ratio (ZCFZL) of each city in Jiangsu Province, the manufacturing sales profit rate of each city in Jiangsu Province (XSLRL), the sales rate of manufacturing products of each city in Jiangsu Province (CPXSL), and the manufacturing of each city in Jiangsu Province. The growth rate of tax revenue of industrial enterprises (SSZZL), the growth rate of manufacturing enterprises' cost (CBZZL) of various cities in Jiangsu Province, and the loss of manufacturing enterprises of various cities of Jiangsu Province (QYKSM) are the control variables.

(2) Sample selection, data sources and empirical analysis

All the data in the empirical part of this paper comes from EPS county and city database, annual reports on the website of Nanjing Customs Government, and statistical yearbooks of cities in Jiangsu Province. This article uses the panel data of each city in Jiangsu Province in 2017 and 2018. The model is set as follows

$$CKJX_{i,t} = \beta_0 + \beta_1 trade_{i,t} + \beta_2 ZCFZ_{i,t} + \beta_3 XSLRL_{i,t} + \beta_4 CPXSL_{i,t} + \beta_5 SSZZL_{i,t} + \beta_6 CBZZL_{i,t} + \beta_7 QYKSM_{i,t} + u_i + \varepsilon_{i,t}$$

Among them, and respectively represent prefecture-level cities and years.β_0、β_1、β_2、β_3、β_4、β_5、β_6 and β_7 are parameters to be estimated. If β_1 is significantly positive, it means that the degree of trade convenience of each city in Jiangsu Province has a positive impact on the export performance of local manufacturing enterprises. After Hausman's test, this article is more suitable for using fixed effects model.

TABLE 1. Panel data regression results table

	CKJX		
trade1	0.0085* (1.84)		
trade2		0.0084* (1.89)	
trade3			0.0085* (1.83)
ZCFZL	0.0009 (0.57)	0.0012 (0.78)	0.0010 (0.61)
XSLRL	0.0017** (2.28)	0.0014* (2.16)	0.0016** (2.26)
CPXSL	0.0050* (1.99)	0.0053* (2.11)	0.0051* (2.01)
SSZZL	-0.0019* (-1.97)	-0.0016* (-1.80)	-0.0018* (-1.93)
CBZZL	-0.0019* (-2.11)	-0.0016* (-1.97)	-0.0018* (-2.08)
QYKSM	0.0004 (0.63)	0.0002 (0.41)	0.0004 (0.59)

Trade 1, trade 2, and trade 3 represent the trade convenience indicators of prefecture-level cities in Jiangsu Province obtained by three weight calculation methods. The results show that the trade convenience of each city in Jiangsu Province has a significant impact on the export performance of local manufacturing enterprises, but the regression coefficient

is small. Specifically, for every standard deviation in the trade convenience of each city in Jiangsu Province, the average export performance of Jiangsu manufacturing enterprises will increase by 3%-4%. If the trade convenience index of each city in Jiangsu Province increases by one unit per year, The export performance of manufacturing enterprises in Jiangsu Province can be increased by 50% within 7 years, and this long-term accumulated growth is also very impressive.

At the same time, the sales profit rate of manufacturing companies, the product sales rate of manufacturing companies, the tax growth rate of manufacturing companies, and the growth rate of manufacturing costs of manufacturing companies all have a significant impact on the export performance of manufacturing companies. Sales profit rate and product sales rate are important indicators to measure the product quality, brand recognition, corporate income level and future development prospects of manufacturing companies. If a company wants to expand overseas markets, go global, and increase its market share, The core work is to improve product quality, improve product structure, enrich product types, reduce product costs through technological innovation, keep up with the trend of the times, and produce high-quality products that meet consumer preferences. Only in this way can companies truly become bigger and stronger.

IV. POLICY RECOMMENDATIONS

(1) Encourage technological innovation in manufacturing enterprises

The sales profit rate of listed manufacturing companies is the decisive factor in the export performance of the company. Only by means of scientific research and development and product innovation, companies can reduce production costs on the one hand, and improve product quality and increase the proportion of high value-added products. Overseas income growth. We must encourage enterprises to innovate independently and realize the transition from "Made in China" to "Created in China". This is the key for Chinese manufacturing enterprises to move toward the center of the world stage.

(2) Solve the "stuck neck" problem of high-end equipment manufacturing industry

This year is the beginning of the 14th Five-Year Plan period, and it is also a breakthrough starting point for "Made in China 2025". The safety and stability of the manufacturing industry is the basis for the construction of a new development pattern of "double cycles". Aiming at the weak links of the manufacturing industry, we must resolutely implement key core technologies to solve the "stuck neck" problem of the high-end equipment manufacturing industry as soon as possible, realize the independent and controllable industrial chain and supply chain, and make the development of my country's manufacturing industry rise again as soon as possible.

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