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Research on the Effect of Free Trade Zone Establishment on Provincial Trade Development

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Abstract: The construction and development of free trade zones (FTZs) in China has been the country's forefront for the national market opening up and the development of international trade, benefiting and stimulating the surrounding economy. Based on the panel data of 31 provinces in mainland China from 2008 to 2017, this paper uses the double difference econometric model to study the FTZs establishment impact on territorial provinces trade development from the import and export perspective. To then test the robustness of the experimental results using the counterfactual test method. The results show that: (1) The FTZs establishment has a significant positive effect on territorial trade development. (2) The FTZs establishment most apparent effect is on the total imports and exports, followed by the total imports, and finally the total exports. (3) Some lagging economic factors will lead to longer reaction times in basic development of FTZs and weaken FTZs establishment net effect.

Keywords: Free trade zone; Territorial Province; Trade development; Double difference model; Import and export; Counterfactual test; Positive effect

Introduction

After the 2008 global crisis, the world economy entered a period of recession and later weak growth, which greatly affected the growth of China's export-oriented economy. In response to this problem, China established FTZs according to national standards and requirements. In September 2013, China's first FTZs batch kicked off in Shanghai. Two years later, with the State Council approval, some coastal provinces and cities (Tianjin, Fujian, Guangdong) started the second construction batch. In 2017, Chinese economy was in a critical "three-phase superposition" period. A third batch of FTZs was approved by the State Council and established in seven provincial levels, further expanding the scope of FTZs from south to north and coast to inland. Finally, in 2018, the Party Central Committee proposed to build an FTZ and a free trade port in Hainan Province. So far, the initially planned FTZs network is completed.

The FTZ is an experimental field for China to synthetically deepen its internal reforms and expand its opening-up. Studying the influence and

operation effects on the area has an important guiding significance for China in order to continue expanding its opening-up pattern and improve its opening-up system. The "Giving greater reform autonomy to the pilot FTZ" policy, proposed by the 19th National Congress of the Communist Party of China, highlights the great practical significance of the reform and exploration of the FTZs. With the development and construction of the FTZs, all walks of life pay more attention to the synthetic impact the FTZs. For example, how does the establishment of an FTZ affect the foreign trade of various regions? How does the construction of FTZs stimulate the import and export trade? These are all issues that need to be studied under the background of China's increasing efforts to establish FTZs in order to formulate more effective economic and trade development policies for provinces that have established FTZs. Based on the above issues, this paper uses the empirical analysis method of the double difference model to evaluate the effects of trade development, then provides theoretical guidance to promote FTZs high-quality development and accelerating China's new opening up pattern formation.

Literature Review

In the era of financial crisis, global economic development is sluggish, and free trade supporters deal with economic development problems by redefining the trade rules and signing bilateral or multilateral trade agreements. In this context, marginalized countries' trade development and economy may be hit hard. As a response to this complex situation, FTZs emerge as providers of not only new concepts of global economic development but also protection for vulnerable developing regions (Ye, 2018). Cai (2001) also pointed out that the Asian financial crisis became a catalyst for the initial action of establishing a free trade area in Northeast Asia. Pak (2010) thinks that the FTZ, from a business environment perspective, provides to all over the world investors special advantages and conveniences. Shin (2013) believes that the FTZ is an important carrier for developing countries to attract foreign investment, promote export trade, and improve the level of economic and social development.

Throughout the existing literature, scholars are interested in the economic growth effect of free trade zones and have conducted a large number of empirical studies. Possebom *et al.* (2017) proves that free trade zone has a significant positive impact on per capita real GDP and has achieved the goal of promoting regional economic growth. Through GTAP simulation, Zhao (2017) concluded that FTZs can drive economic growth by generating positive trade effects. Wang *et al.* (2017) and Liu *et al.* (2018) used the evaluation method of policy effect and synthetic control method

to evaluate the FTZs economic impact by comparing the differences of economic changes before and after the establishment of the FTZs. The results showed that the FTZs free trade impact on the local economy was positive. Zhang *et al.* (2018) conducted an empirical analysis of 11 FTZs establishment effect on economic growth from a dynamic perspective based on the double difference model. The results showed that the establishment of FTZs had the effect of promoting regional economic growth. Castilho *et al.* (2019) and Teixeira (2020) stated that the establishment of the Manaus Free Trade Area has ensured the improvement of local social conditions and has been a major driver of regional employment, wages and economic growth over the past decades. In summary, most scholars have a positive attitude towards the FTZs, and agree on the profound significance the FTZs have for regional economic growth.

In the field of international trade, most scholars have studied the FTZs trade impact on territorial provinces from the normative analysis perspective. Chen *et al.* (2014) used the specific driving mechanism method to explain that FTZs can break the traditional market segmentation situation by reducing taxes and fees and carrying out system reforms, so as to improve the economic growth rate. Wang *et al.* (2014) put forward relevant suggestions for the Shanghai Free Trade Zone by analyzing how different countries' policies and measures facilitated international trade. Chen *et al.* (2018) used the analytic hierarchy process and grey relational analysis to evaluate the development level of the six FTZs and put forward suggestions. Li *et al.* (2018) used the Tyr index and Grey model to explain the income gap, total import and export volume, and fixed asset investment after the establishment of an FTZ. A small number of scholars also used empirical models to analyze the FTZs trade impact. Xiang *et al.* (2016) used a nonlinear double difference model and synthetic control method to study the FTZ establishment impact on Shanghai's capital flow and studied the FTZ effect from a micro perspective. Wei *et al.* (2020) used a multi-period double difference method to investigate the impact of an FTZ strategy on high-quality economic development. Generally speaking, the existing literature has focused on the qualitative or quantitative analysis of a single FTZ, and seldom has used the 31 provinces and cities across the country panel data to make an overall impact evaluation. In addition, the existing literature focuses on normative analysis and lacks of empirical models, which easily leads to certain discrepancy in experimental estimation results, making unlikely to reach any clear result and conclusion from FTZs studies.

To address the above issues, this study was conducted using the panel data of 11 FTZs in 31 mainland China provinces from 2008 to 2017, based on existing theories and researches and from the trade development impact

perspective. This study adopts the total export-import volume, total export volume, and total import volume as the main indicators to study the international trade development. Thus, it uses the double differential econometric model to analyze the FTZs establishment effect on provincial trade development and uses the counterfactual method to test its robustness.

Methodology

Model Construction

The double difference model can effectively overcome the endogeneity of the model and accurately estimate the effect after the policy implementation. In order to clearly understand the FTZs influence on territorial trade development before and after its establishment, this paper uses double difference model to evaluate FTZs establishment and implementation effect. The double difference model is based on the data obtained from natural experiments. By establishing the model, the prior differences between the research objects can be effectively controlled, and the unbiased estimation results of the policy impact can be obtained.

According to most scholars' research, the time dummy variable describes the difference between the two periods before and after the experiment. Even without the experiment, the two groups also have this time trend. Therefore, this article adds time trend variables that can reflect the natural growth caused by the time trend in the benchmark formula of the standard double difference model so as to eliminate other factors as much as possible and try to get unbiased estimation results. Considering the influence of its own economic development, investment and production scale, profit distribution structure, exchange rate, and other factors, this paper selects the per capita GDP, whole society total investment in fixed assets, foreign-invested enterprises total investment and synthetic exchange rate change rate of 31 provinces in mainland China from 2008 to 2017 as control variables.

Specifically, the reference model settings of the double difference model are as follows:

$$Y_{n,it} = \alpha_0 + \alpha_1 Area_{it} + \alpha_2 Date_{it} + \alpha_3 Area_{it} \times Date_{it} + \alpha_4 X_{it} + \gamma_i \Sigma_{i=0}^{9} T_i + \mu_{it} \quad (1)$$

Where i represents the sample province, and t represents the year. $Y_{n,it}$ is the explained variable, which represents the trade situation of the i province in year t. It is expressed by the total imports and exports, the total imports and the total exports respectively. $Area_{it}$ represents the dummy variable of the region. If an FTZ is established in the region, then area $Area_{it}$ $=1$, if not established, $Area_{it} = 0$. $Date_{it}$ represents the dummy variable of

time. An illustration can be that in a certain area since the free trade zone established, $Area_{it} = 1$ in every following year, including the establishing year. Meanwhile, $Area_{it} = 0$ in the years before the establishment. $Date_{it} = 1$; in the years before the establishment, $Date_{it} = 0$. $Area_{it} \times Date_{it}$ represents the explanatory variable, that is, the synthetic virtual variable of time and area. It can be seen that this variable is meaningful only when both time and area variables are 1. The coefficient a_3 of the synthetic dummy variable measures the net effect of the FTZs establishment on the provincial trade change under double difference. X_{it} represents the control variable, which mainly selects per capita GDP, social fixed asset investment, foreign-invested total investment and synthetic exchange rate changes as reference indicators. T_i is a time trend variable, taking 2008 as the base period, which is T_0, and so on till 2017 which is T_9.

The model focuses on the estimation construction, followed by comparison processing, namely, the "before and after comparison" of the time dummy variables and the "with or without comparison" of the regional dummy variables, so as to obtain the policy implementation impact on a series of indicators. And finally, the influence of the policy on a certain economic phenomenon and the degree of influence can be obtained . The double difference model idea is expressed in Table 1 below.

Table 1: Representation of the Double Difference Model Idea

	Prior to policy implementation ($Date_{it} = 0$)	*After implementation of the policy* ($Date_{it} = 1$)	*Difference*
Experimental group ($Area_{it} = 1$)	$\alpha_0 + \alpha_1$	$\alpha_0 + \alpha_1 + \alpha_2 + \alpha_3$	$\alpha_2 + \alpha_3$
Control group ($Area_{it} = 0$)	α_0	$\alpha_0 + \alpha_2$	α_2
Difference	α_1	$\alpha_1 + \alpha_3$	α_3 (DID)

Variable Selection

Dependent variables: This paper, based on the model construction, selects the total import-export volume, total export volume and total import volume (Calculated according to the annual domestic destination and source of goods, unit: thousand US dollars) of each province as the indicators to measure the trade development level.

Explanatory variables: Combined with the principle of double difference, we introduce time virtual variable and region virtual variable. If the FTZ is established in the region, the dummy variable of the region is 1, and if it is not established, it is 0.

For a certain region, the time dummy variable is set to 1 from the year when the FTZ was established and every year thereafter, and the variable is 0 for the year before the establishment.

Control variable: Selecting control variables' purpose is to control the various factors influencing trade development, so the control variables selected are the four indicators that most directly affect the presentation of trade data. (1) Per capita GDP: Trade will first be affected by the economic development of a country or region in a certain period, and GDP can measure economic development. Economic development status can affect not only the importing countries' scale and demand but also the exporting countries' capacity. Any demand is closely linked to demographic factors. Therefore, this article sets the economic indicator that affects trade as per capita GDP.

(2) Total investment in fixed assets: Investment determines the scale of production. This indicator can measure the production scale of a country or region in a certain period, thereby measuring the importing countries' trade demand capacity and the exporting countries' trade supply capacity. (3) Foreign-invested enterprises total investment: It directly determines the production scale of such enterprises. Besides, it determines the international transfer scale of profits and benefits, which will have a certain impact on international trade and the international balance of payments. (4) Synthetic rate of exchange rate changeÿWe first calculate the year-end exchange rate (annual average price) of RMB against US dollar, Japanese yen, Hong Kong dollar and Euro respectively from 2008 to 2017, and then take the average growth rate of the year-end exchange rate relative to the exchange rate in 2002 as the index. This index can directly measure the demand scale of importing countries, as well as the profits and benefits of export trade.

Table 2: Variable Selection in the Measurement Model

Variable types	*Variables*	*Variable definitions*
Dependent variables	$Y_{1,it}$	Total volume of imports and exports
	$Y_{2,it}$	Total annual imports
	$Y_{3,it}$	Total annual export
Explanatory variables	$Area_{it} \times Date_{it}$	Time and region synthetic dummy variables
	$X_{1,it}$	Per capita GDP
	$X_{2,it}$	Total investment in fixed assets
Control variables	$X_{3,it}$	Foreign invested-enterprises total investment
	$X_{4,it}$	Synthetic rate of the exchange rate change

Data Sources

This paper uses the panel data of 31 provinces during the ten years from 2008 to 2017. The above data can be inquired and downloaded from three different sources: China Statistical Yearbook, National Bureau of Statistics, and annual Statistical Report of National Economic and Social Development of all provinces in 2017. There are nine variables used in this paper, including three dependent variables, four control variables, one time dummy variable and one provincial dummy variable. Each variable consists of 310 sample data. Four statistics are used to describe variable data: mean value, standard deviation, minimum value and maximum value. The variable data statistics summary can be seen at the following Table 3.

Table 3: Variable data descriptive statistics

Variables	*Sample number*	*Mean value*	*Standard deviation*	*Minimum value*	*Maximum value*
$Y_{1,it}$	310	114387250.4	212729406.3	288751	1281191589
$Y_{2,it}$	310	51990728.1	90875715.58	21484	549428183
$Y_{3,it}$	310	62396522.5	124904253.6	197830	745309548
$Y_{1,it}$	310	43936.17742	23582.12444	9855	128994
$Y_{2,it}$	310	13140.77929	10644.50343	309.91	55202.72
$Y_{3,it}$	310	138935.2548	224880.7572	534	1762227
$Y_{4,it}$	310	-0.088272996	0.07246394	-0.2121247	-0.00625434
$Area_{it}$	310	0.3548387	0.479238	0	1
$Date_{it}$	310	0.0677419	0.2517088	0	1

Empirical Results and Analysis

Empirical Results

After standardizing the data of all variables in this paper, the software STATA 14.0 was used to perform an empirical analysis on the data without control variables to obtain a set of data results, and then control variables were added to obtain a second set of comparative results.

Therefore, according to the double difference model mentioned above, an empirical study was conducted in order to explore the FTZs establishment impact on trade development. Table 4 shows the empirical analysis results of the FTZs establishment influence on the provincial total import and export volume, total import volume and total export volume. The data is based on 2008 (T_0), to 2017 (T_9). The first column of each set column is the result of not adding the control variable, and the second column is the estimation result of adding the four control variables (Per

capita GDP, total investment in fixed assets, total investment of foreign-invested enterprises and synthetic rate of exchange rate change). The regression results of the two columns of data form are in contrast. It can be seen from the table that adding the control variables has a positive effect on the results data, increasing the significance. The results are as follows:

Table 4: Double Difference Estimation Results: FTZs Establishment on Provincial Trade Development

	$Y_{1,it}$		$Y_{2,it}$		$Y_{3,it}$	
Constants	0.149	0.017	0.363	0.037	0.332	0.002
	(1.14)**	(0.24)*	(2.81)**	(0.54)*	(2.72)**	(0.03)*
T_1		-0.103		-0.094		-0.108
		(-1.010)**		(-0.931)**		(-1.04)**
T_2		-0.070		-0.051		-0.083
		(-0.573)*		(-0.413)*		(-0.676)*
T_3		-0.057		-0.036		-0.071
		(-0.395)*		(-0.246)*		(-0.497)*
T_4		-0.019		-0.002		-0.031
		(-0.133)**		(-0.015)**		(-0.213)*
T_5		0.065		0.114		0.027
		(0.382)*		(0.694)*		(0.153)*
T_6		0.034		0.068		0.009
		(0.205)*		(0.447)*		(0.051)*
T_7		-0.031		-0.096		-0.029
		(-0.112)*		(-0.349)*		(-0.107)*
T_8		-0.331		-0.350		-0.308
		(-2.191)*		(-2.605)*		(-1.846)*
T_9		-0.562		-0.570		-0.543
		(-3.064)*		(-3.343)*		(-2.788)*
$X_{1,it}$		0.186		0.293		0.104
		(2.064)**		(3.425)***		(1.123)*
$X_{2,it}$		0.237		0.179		0.272
		(5.162)***		(3.854)**		(5.625)***
$X_{3,it}$		0.521		0.541		0.528
		(3.588)***		(3.815)***		(3.413)***
$X_{4,it}$		0.167		0.185		-0.150
		(2.630)***		(3.136)***		(-2.227)*
Synthetic dummy variable (α_3) coefficient	0.365 (1.01)*	0.244 (0.88)**	0.213 (0.91)*	0.179 (0.65)**	0.062 (0.85)*	0.040 (0.20)**
Goodness offit	0.1185	0.5529	0.1067	0.6169	0.1224	0.5887

Note: The first line of each data result is the explanatory variable coefficient. The second line is the t statistic. *, **, and *** represent the significance level of 10%, 5%, and 1% respectively.

It can be seen from the above that the coefficient α_3 of the synthetic dummy variable represents the FTZs establishment net effect. Also, when the imports and exports total amount, total imports amount, and total

exports amount are the explained variables, the coefficient α_3 of the synthetic dummy variable is positive regardless of whether the control variable is added or not. This shows that the FTZs establishment has a positive effect on the total import and export volume, total import volume, and total export volume. From the perspective of the synthetic dummy variable size, without adding the control variable, the synthetic dummy variables coefficients of $Y_{1,it}$, $Y_{2,it}$ and $Y_{3,it}$ are 0.365, 0.213 and 0.062 respectively. When the control variable is added, the synthetic dummy variables coefficients are 0.244, 0.179, 0.040, respectively. Whether the control variables are added or not, the synthetic virtual variable of $Y_{1,it}$ is greater than $Y_{2,it}$ and greater than $Y_{3,it}$. This shows that the establishment of an FTZ has the largest net effect on the total import and export volume, followed by the total import volume, and finally, the total export volume.

At the same time, we compare the synthetic dummy variable coefficient before and after adding the control variable. It can be seen that the synthetic dummy variable coefficients after adding the control variable are all smaller than those without adding the control variable, but the significance level of the coefficient and the goodness of fit are both improved, indicating that the net effect after adding the control variable is less than the net effect without adding the control variable. The reason is that although the FTZs establishment could promote the trade economy growth through financial innovation and further external market opening. Still, there is a certain lag in the development of the overall economy, the fixed investment and foreign investment of the whole society, which leads to a longer reaction time for the infrastructure construction and market information circulation of the FTZs. Making it unable to guarantee FTZs keeping the development peace. Therefore, the net effect of adding control variables is less than that without control variables.

Robustness Test

Common trend is the most critical and important assumption when adopting the double difference model. It can be understood that without the FTZ policy implementation influence, the experimental group and the control group would have a consistent development trend that does not change systematically with time. Although the trade development of the 31 provinces has certain differences due to their factor endowments and historical development and other factors, from a macro perspective, the overall trade development of the 31 provinces still has a certain convergence. Moreover, according to the actual situation, the FTZs establishment in the eastern, western, and northeastern regions of China also reflects a certain degree of randomness, which makes the convergence more convincing.

In fact, the trade development of a region is not only affected by the establishment of an FTZ but may also change due to factors such as the overall economic development pattern and other policies. However, if the differences caused by these factors were not necessarily related to the FTZs establishment, it would directly lead to the failure of the previous estimation results and research conclusions, which requires further robustness verification. This article will draw on the relevant scholar's research results and adopt the counterfactual test method, which is to change the FTZs establishment time to conduct a robustness test.

This paper assumes that the FTZ establishment time is one year and two years ahead of time, respectively, and different time dummy variables are substituted into the original regression model in order to obtain synthetic virtual variables estimations results. If the new regression results with the synthetic dummy variable were not significantly positive or the synthetic dummy variables coefficient showed a decreasing trend, the dependent variable change would be caused by the explanatory variable. This shows that the provincial trade development increase is due to the FTZ establishment, which objectively completes the above estimation results and the robustness test of the conclusion. The test results are as follows:

Table 5: Counterfactual Test Results

	$Y_{1,it}$		$Y_{2,it}$		$Y_{3,it}$	
	1 year in advance	*2 years in advance*	*1 year in advance*	*2 years in advance*	*1 year in advance*	*2 years in advance*
Constants	0.015	0.0012	0.031	0.037	0.002	0.001
	(0.22)*	(0.19)*	(0.47)**	(0.54)**	(0.03)*	(0.02)*
T_1	-0.054	-0.067	-0.045	-0.071	-0.059	-0.251
	(-0.324)*	(-0.342)*	(-0.265)*	(-0.497)*	(-0.366)*	(-1.567)*
T_2	0.062	0.073	0.094	0.027	0.038	-0.054
	(0.325)*	(0.573)**	(0.472)**	(0.153)*	(0.206)*	(-0.324)*
T_3	0.164	0.057	-0.217	-0.036	0.121	-0.018
	(0.766)**	(0.395)*	(-0.972)*	(-0.246)*	(0.591)**	(-0.07)*
T_4	0.198	0.172	-0.243	-0.002	0.160	0.025
	(0.886)**	(0.965)**	(-1.054)*	(-0.015)*	(0.739)**	(0.217)*
T_5	-0.018	-0.065	-0.122	-0.114	-0.067	-0.053
	(-0.07)*	(-0.382)*	(-3.69)*	(-0.694)*	(-0.342)*	(-0.127)*
T_6	0.021	0.015	0.003	0.068	0.034	0.065
	(0.075)*	(0.032)*	(0.011)*	(0.447)**	(0.122)*	(0.382)*
T_7	-0.029	-0.017	-0.152	-0.196	-0.017	-0.035
	(-0.110)*	(-0.102)*	(-0.349)*	(-0.439)*	(-0.060)*	(-0.114)*
T_8	-0.072	-0.099	-0.128	-0.029	-0.018	-0.308
	(-0.268)*	(-0.387)*	(-0.478)*	(-0.107)*	(-0.07)*	(-1.846)*
T_9	-0.421	-0.524	-0.038	-0.570	-0.014	-0.375
	(-3.012)*	(-3.044)*	(-0.134)**	(-3.343)*	(-0.051)**	(-2.542)*

contd. table 5

$X_{1,it}$	0.150	0.121	0.255	0.239	0.101	0.096
	(1.694)**	(1.256)*	(3.051)***	(3.254)***	(1.120)**	(1.056)*
$X_{2,it}$	0.200	0.284	0.140	0.118	0.238	0.242
	(4.265)**	(5.162)**	(2.902)**	(2.543)*	(4.904)**	(5.425)***
$X_{3,it}$	0.533	0.512	0.532	0.520	0.521	0.515
	(3.284)**	(3.152)**	(3.243)**	(3.151)*	(3.158)**	(3.113)*
$X_{4,it}$	0.156	0.102	0.182	0.165	-0.133	-0.150
	(2.967)**	(1.630)*	(3.614)**	(2.361)**	(-2.442)*	(-2.227)*
	0.241	0.236	0.174	0.171	0.034	0.029
Synthetic dummy variable	(0.81)*	(0.75)*	(0.63)**	(0.61)*	(0.17)**	(0.14)**
Goodnessof fit	0.5521	0.5517	0.5807	0.5702	0.5354	0.5269

Note: The first line of each data result is the explanatory variable coefficient. The second line is the t statistic. *, **, and *** represent the significance level of 10%, 5%, and 1% respectively.

It can be seen from Table 5 that when the FTZs establishment time is advanced by one year, the synthetic dummy variable coefficients of the total import and export, the total import and the total export are 0.241, 0.174, 0.034, respectively. Compared with the results without advancement, the net effect is reduced, and the significance level drops from 5% to 10% and from 1% to 5%. When the FTZ is established two years earlier, their synthetic dummy variable coefficients are 0.236, 0.171, 0.029. Compared with the results without time advance, the net effect, significance level and goodness of fit value all decreased.

Compared with Table 4, in the regression results of the three dependent variables, the synthetic dummy variable coefficients show a decreasing trend. That is to say, in the case of changing the FTZs establishment time, the net effect of the FTZ policy on these three indicators shows a decreasing trend. This exposes that other factors do not cause the variable dependent change, but are caused by the explanatory variable. Therefore, it means that the trade development increment in the FTZs provinces is due to the FTZs establishment, which confirms the robustness of the estimation results and research conclusions obtained above.

Conclusion and Implications

Based on the data of 31 provinces in mainland China from 2008 to 2017, this paper measures the FTZs net trade development effect by using a double differential econometric model, then verifies the robustness of the experimental results by using a counterfactual test. The research results are as follows: (1) Regardless of whether the control variables are added for regression or not. The overall results show that synthetic dummy

variables coefficients are significantly positive at a certain level, indicating that the FTZs establishment has a positive effect on trade development. Moreover, the FTZs have the most significant positive effect on the total import and export volume, followed by the total import volume, and finally, by the total export volume. (2) From the FTZs net effect perspective, adding the control variables has less net effect than not adding them. However, there will be a certain lag in factors such as the normalization of the overall economy, fixed investment in the whole society and foreign investment. This will lead to the lack of business in infrastructure construction, logistics supply and support, which will lead to the weakening of net effect. (3) Robustness test results show that: Compared with the research results of standard data, the synthetic dummy variable coefficient α_3 of the counterfactual test shows a decreasing trend whether the FTZs establishment is one year or two years in advance. This shows that the trade development increase in those provinces with FTZs is due to the establishment of an FTZ, which further confirms that the establishment of the FTZs has a positive role in promoting the provincial trade development.

Relevant research shows that the FTZ policy implementation greatly contributes to promote the further opening of the external market, the production flow and economic growth, accelerating the government functions transformation, promoting industrial structure optimization and upgrading. In order to enhance FTZs impact on trade development, and according to the previous research results, the following countermeasures and suggestions are put forward: (1) The FTZ should continuously deepen reforms in terms of form and supervision system, promote innovation and development, and advocate open construction. (2) China's FTZs started late, so in terms of form and supervision system, China needs to continue to learn from more advanced countries and regions to promote China's FTZs development. (3) The government should facilitate a better investment environment to attract higher-quality investment, and then promote the FTZs next construction stage to continue the development in a more efficient and high-quality direction. (4) Trade facilitation can effectively promote the rational allocation and full use of limited resources. The government should advocate trade facilitation in FTZs, strengthen regional cooperation, and innovate and coordinate development.

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