

Analysis of Service Trade and Economic Growth between China and Thailand

Yin Xiaobo, Zhou Xinying

College of Economics and Finance, Huaqiao University, Quanzhou, Fujian, 362021, China

Corresponding author is Yin Xiaobo

Abstract

Along with the further development of China - ASEAN Free Trade Area, the economic cooperation between China and Thailand has become more and more frequent, China-ASEAN cooperation in service areas has once again become the focus of regional economic cooperation. Therefore, it is of great realistic significance to study in depth how service trade of the two countries leads the development of their economic growth. Based on Balassa export extended aggregate production function under the open economy condition, introduce export and import variable into C-D production function to establish a new model including import and export variables. Using 1990-2011 panel data on trading in services and SUR method to make an empirical analysis on the contribution rate to economic growth of the service trade in China and Thailand by empirical analysis. To compare the differences of the contribution of classification of service trade to economic growth between China and Thailand, relevant models were constructed to analyze the contribution of transport services trade, tourism service trade and other services to economic growth. Studies concluding that there is a significant difference in promoting of Sino-Thai bilateral trade in service imports and exports to economic growth, the contribution of bilateral service trade exports is more than imports. The contribution of China's total volumes of import and export service trade and exports to economic growth is greater than Thailand, and in the contribution of total volumes of import service trade to economic growth, Thailand overall is higher than China due to the difference of output elasticity. So China's economic development is more susceptible to global environmental degradation and international financial crisis and other factors, the study's conclusions provide the important theory guidance of further development of national policy and industrial policy of Chinese to Thai trade services.

Keywords: SERVICE TRADE, SERVICE INDUSTRY, ECONOMIC GROWTH, CONTRIBUTION RATE

1. Introduction

In November 18, 2011, China and ASEAN signed the "China - ASEAN FTA 'the agreement on trade in services' the second batch of specific commitment protocol", and it came into effect on January 1, 2012. From then on, the cooperation of China and ASEAN countries in the field of service trade has become a hot topic of regional economic cooperation once again. At present, Thailand has been the Chinese second service trade partner in ASEAN. We are constantly deepening the liberalization, facilitation, economic

integration and industrial integration of our bilateral trade and investment, as well as the integration of our economy and trade. Therefore, the in-depth study of the contribution to economic growth of bilateral service trade development has not only a certain urgency, but also the strong practical significance. This paper mainly studied the differences of service trade between the two countries contributing to economic growth, so as to provide important guidance further for the country policies and industrial policies of the development of service trade in China and Thailand.

Table 1. The import and export volume of the trade of China and ASEAN countries and the proportion of the world (unit Billion dollars)

Country	Import	Proportion	Export	Proportion
The global	38675. 00	——	41500. 00	——
China	2364. 79	6. 11%	1820. 47	4. 39%
Singapore	1104. 91	2. 86%	1250. 68	3. 01%
Thailand	504. 90	1. 31%	404. 84	0. 98%
Malaysia	373. 06	0. 96%	357. 06	0. 86%
Indonesia	318. 19	0. 82%	199. 40	0. 48%
Philippines	120. 13	0. 31%	155. 16	0. 37%
Vietnam	117. 09	0. 30%	87. 74	0. 21%
Kampuchea	14. 48	0. 04%	21. 91	0. 05%
Brunei	16. 03	0. 04%	12. 55	0. 03%
Laos	2. 58	0. 01%	4. 89	0. 01%
Burma	7. 61	0. 02%	3. 34	0. 01%

Data sources based on the World Trade Organization database (stat..Wto.org)

1.1. Comparative analysis of the service trade characteristics in China and Thailand

Figure 1 showed the ratio that China's service trade export accounting for the world's service trade export increased. The proportion of transport export declined from 1990-1998 years, but 1998-2008 years showed a substantial increase, and rose dramatically after one year's precipitous decrease in 2008; tourism service trade export proportion basically went up except 2003; other service export ratio showed an upward trend while 1997 – 2001 declined. From the export ratios that China's service trade of various kinds took up the world's corresponding categories, the ratio of tourism service trade export accounted for the highest, and the proportion of transport service trade export was lower than other service trade export from 1990 to 2004, while 2004 – 2010 conversely showed a higher ratio than other service trade export.

Except a slight decreased in 1997 - 1998, the ratio that China's service trade import accounted for the total world trade in service of imports basically went up. The proportion of transport service trade import increased significantly from 1991 to 1997, but in 1997 - 1998 there was a precipitous decrease. Then it soared in 1998 – 2002, and after a slight decline 2002 - 2008 years witnessed a sharp rise; the ratio of tourism service trade import mainly showed an ascending trend year by year; the proportion of service trade import rose slowly in 1990 - 1995, and after a slight decline in 1996, there is a gentle increase. So was following years after 2008. From the import ratios that China's service trade of various kinds took up the world's corresponding categories, China's transport services trade import proportion, tourism service trade import and other service trade import almost accounted for the whole of three.

Figure 2 showed the proportion of Thailand's service trade export accounting for the world service trade export has three stages. The first stage was 1990 – 1996 years. During this period, the ratios of Thailand's service trade export, transport, tourism, and other service trade export were all increasing. The second stage was 1996-1998 years. Thailand's service trade export and tourism service export dropped dramatically, and the transport service trade became stable after a gentle falling in 1998, while other service trade export declined since the year 1997. From the export ratios that Thailand's service trade of various kinds took up the world's corresponding categories, the proportion of Thailand's tourism service trade export was much higher than that of other two kinds of services, and the transport service trade export ratio was higher than s except 1992 – 1998, while other service trade export had a lower proportion after 1998.

Figure1 The distribution of China's service trade exports and imports accounted

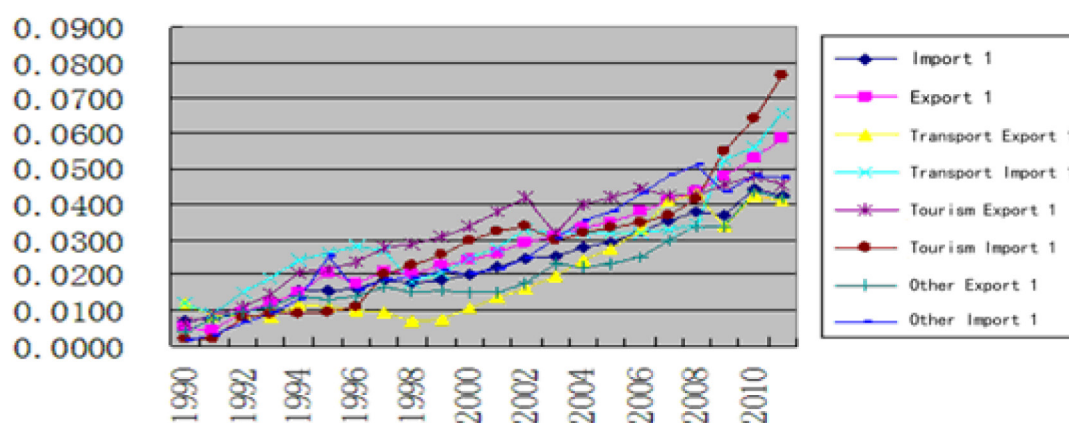


Figure 1. The distribution of the service trade characteristics in China and Thailand

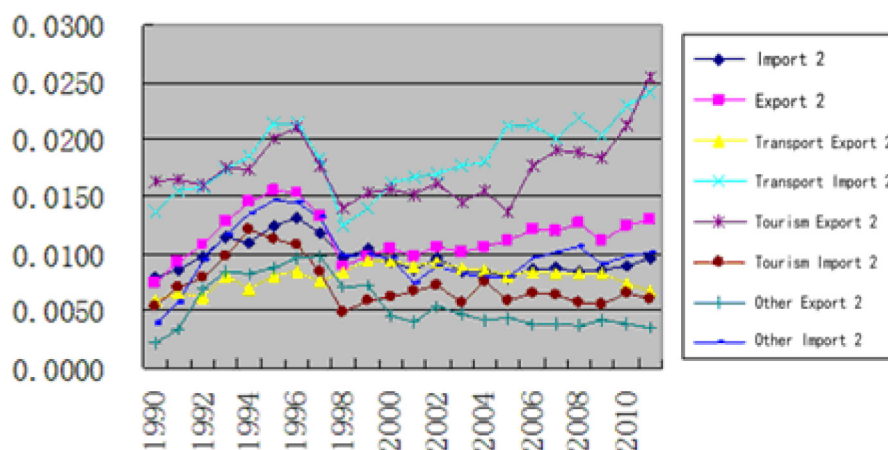


Figure 2. The distribution of Thailand's service trade exports and imports accounted

The proportion of Thailand's total service trade import, transport service trade import, tourism service trade import, and other service trade import accounting for the world's trade in services showed three stages. The stage one was 1990 – 1995. The stage two was 1995 - 1998, and various types of service trade imports showed a sharp decrease. In the stage three, they all increased slowly during 1998 – 2010 in which the ratio of tourism service trade import had a mild trend. From the import ratios that Thailand's service trade of various kinds took up the world's corresponding categories, the proportion of transport service trade import was higher than that of tourism and other service trade import. Also, tourism service trade import ratio was the lowest than ordinary.

2. Establish the model

2.1. Theoretical basis

In order to analyze the differences of service trade's contribution to economic growth in China and Thailand, this paper used Balassa (1978) proposed export extended aggregate production function as the basic model. Balassa introduced the export variable into the traditional Cobb-Douglas function (referred to as the C-D function), so the function was adapted to the extended aggregate production function under an open economy. $Y = F(K, L, X)$, where Y is total output, and K, L, X respectively stand for capital, labor and export. Subsequently on the basis of the function, many scholars modified the concrete form of a model to different degrees. For instance, Taylor (1981) introduced the export variable directly into the exponent form of the C - D function, which made the C - D function form become $Y = AK \delta L \beta X \gamma$, where A is technology. Also, Hine (1998) supposed C - D production function was $Q_{it} = A \gamma K \alpha It N \beta it$, where Q is the actual output, and K is capital stock, N stands for per unit of effective labor, A is hypothesized to be related to time, import and export. According to the

method of the above literature, this paper introduced trade export and import variables into the C-D production function, so as to establish a new production function including import and export variables.

$$Y_t = e^\lambda K_t^\alpha L_t^\beta M_t^\gamma X_t^\eta \quad (1)$$

Above all, Y, A, K, L, M, X had the same meaning. Also, α and β respectively represented output elasticity of capital, and output elasticity of labor. γ and η respectively stood for output elasticity of import and elasticity production of export. Then, Equation (1) was made on both sides of natural logarithm to get the linear production function obtained with variables for import and export.

$$\ln Y_t = \lambda + \alpha \ln K_t + \beta \ln L_t + \gamma \ln M_t + \eta \ln X_t \quad (2)$$

According to equation (2), the regression model was established between the service trade and economic growth between China and Thailand.

$$\ln Y_{it} = \alpha_0 + \alpha_1 \ln K_{it} + \alpha_2 \ln L_{it} + \alpha_3 \ln M_{it} + \alpha_4 \ln X_{it} + \mu_{it} \quad (3)$$

In equation (3), Y was output, K was actual capital, L stood for employment, M, X respectively stood for actual import and export trade in services. μ was regarded as random disturbance, and $i = 1, 2$, which was on behalf of China and Thailand respectively. In addition, in order to compare the differences of service trade's contribution to economic growth in China and Thailand, this paper also established equation (4), which was used to analyze transport service trade, tourism service trade and other service trade's contribution to economic growth.

$$\ln Y_{it} = \alpha_0 + \alpha_1 \ln K_{it} + \alpha_2 \ln L_{it} + \alpha_3 \ln MT_{it} + \alpha_4 \ln MTR_{it} + \alpha_5 \ln MELSE_{it} + \alpha_6 \ln XT_{it} + \alpha_7 \ln XTR_{it} + \alpha_8 \ln XELSE_{it} + \mu_{it} \quad (4)$$

In equation (4), MT, MTR and MELSE respectively represented transport, tourism and other ser-

vice trade import. XT, XTR and XELSE respectively stood for transport, tourism and other service trade export. Other symbols' meanings were the same as equation (3).

2.2. The data source

Due to the availability of data, output Y of China and Thailand was represented by gross domestic product (GDP), capital input K was represented by the fixed capital investment, and labor input L was expressed by employment at the end of the year. The data of output, fixed capital investment, employment at the end of the year all referred to the statistical yearbook of the China's National Bureau. RMB was exchanged into dollar according to the annual exchange rate. The output data in Thailand and the employment data at the end of the year were all from the United Nations database, and the fixed capital investment data were from the Thailand National Bureau; Thai baht was converted to dollar according to the exchange rate yearly. The statistics of China's service trade came from the website China trade in services, and Thailand's came from the WTO website.

3. Empirical analysis

3.1. Research methods

The data in Table 2 showed that the import and export of service trade of China and Thailand had a strong correlation. The correlation coefficient of China's import of service trade in China and Thailand's import of service trade was 0.966053, and the correlation coefficient of China's export of service trade in China and Thailand's export of service trade would be 0.951336, which indicated that the close trade re-

lation in services between Thailand and China. Because the relevance of import and export of service trade between two countries was greater, their import and export trade in services might be affected by the common factors, which further affected the national economic growth through trade. So, as for OLS estimations of individual countries, there might be some correlation between the residuals. In order to effectively estimate the contribution to economic growth of service trade of import and export in China and Thailand, there need to use SUR (seemingly unrelated regression, SUR) to pose estimate on panel data of the two countries. And In order to test the robustness of the regression results, this paper used OLS regression and SUR regression to analyze the model. The analysis results were shown in Table 3 and table 4.

From table 3 and 4, the conclusion was almost accordant in coefficient signs and the degree of significance by the two kinds of regression methods accordant, so the estimated results had the certain robustness. However, due to the separate OLS regression analysis of the two countries, the estimation results obtained may have errors, so finally the results of SUR were accepted. Therefore, the following analysis was based on the SUR regression equation.

3.2 The analysis of regression results

From model 1 in table 3, it was seen that labor input and capital input in China had a role in promoting economic growth from the regression results, China's labor input-output elasticity was less than the capital input-output elasticity, which indicated that China existed the scarcity of capital and the excess of labor

Table 2. The volume correlation of Sino-Thai service trade import and export

	Import		Export	
	China	Thailand	China	Thailand
China	1	0.966053	1	0.951336
Thailand	0.966053	1	0.951336	1

Table 3. The OLS and SUR (FGLS) estimation results of the import and export volume and the classification of service trade in China and Thailand

Variable	Estimation results of OLS				Estimation results of SUR			
	China		Thailand		China		Thailand	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Constant	<u>0.071075</u>	-11.22631	2.700196	3.119678	<u>11.61958</u>	<u>-16.92496</u>	2.212425	2.466312
Capital	0.396040	0.4126	0.280049	0.231792	1.385366	1.884346	0.287427	0.256928
Labor	<u>0.301522</u>	1.335034	<u>-0.091796</u>	<u>-0.071374</u>	0.359729	0.32778	<u>-0.027977</u>	<u>0.010911</u>
Import&Export	0.402795		0.576814		0.386080		0.562561	
Transport		0.353372		<u>0.032951</u>		0.384148		<u>0.037</u>
Tourism		0.298794		0.529741		0.268349		0.46054
Others		-0.220443		0.103449		<u>-0.16800</u>		0.11929
AdjustmentR ²	0.9953	0.9959	0.9953	0.9959	0.9951	0.9968	0.9951	0.9968

Note the underlined data did not pass the significance level test

Table 4. The OLS and SUR (FGLS) estimation results of the import and export and the classification of service trade in China and Thailand

Variable	Estimation results of OLS				Estimation results of SUR			
	China		Thailand				China	
	Model 3	Model 4	Model 3	Model 4	Model 3	Model 4	Model 3	Model 4
Constant	<u>5.335475</u>	<u>8.087451</u>	2.654879	3.70415	<u>-1.568598</u>	<u>8.193972</u>	2.677146	3.70682
Capital	0.267837	0.26162	0.332816	0.212068	0.492085	0.260473	0.323532	0.212198
Labor	<u>-0.146376</u>	<u>-0.412087</u>	<u>-0.091413</u>	<u>-0.058872</u>	0.248292	<u>-0.421892</u>	<u>-0.08047</u>	<u>-0.059308</u>
Import	0.722611		0.593303		0.731793		0.485108	
Export	<u>-0.123342</u>		<u>0.004165</u>		<u>-0.143098</u>		<u>0.100884</u>	
Transport export		0.099383		<u>-0.182927</u>		0.098685		<u>-0.182739</u>
Transport import		0.13165		<u>0.168588</u>		<u>0.132467</u>		0.167999
Tourism export		0.590799		0.426392		0.592598		0.42754
Tourism import		<u>0.035634</u>		<u>-0.050396</u>		<u>0.034919</u>		<u>-0.051363</u>
Other exports		0.306279		<u>0.096254</u>		0.309216		0.096294
Other imports		<u>-0.379292</u>		<u>0.094486</u>		<u>-0.380955</u>		<u>0.094489</u>
AdjustmentR2	0.9961	0.997	0.9961	0.997	0.9967	0.9972	0.9967	0.9972

Note the underlined data did not pass the significance level test

in the process of economic growth. Thailand was different from China, its output elasticity of capital and labor would be respectively 0.297427 and -0.027977. The labor output elasticity is negative, and did not pass the significant level test, which showed it was not significant that Thailand's labor input affect the economic growth from the regression results. Compared to labor input, Thailand's capital investment had a much greater effect on the economic growth. In a word, it was obviously different that the two countries' import and export volume of service trade to promote economic growth, as for the effect on economic growth resulting from service trade import and export volume, China was lower than Thailand.

From model 2 in table 3, the results of analysis showed the total volume of the classification of service trade also existed significant differences to promote economic growth. China's transport and tourism both had a role in promoting economic growth. The output elasticity of transport service trade was 0.384148, tourism service trade was 0.268349, and other services trade was negative, and did not pass the significant level, which indicated the effect to promote economic growth was not obvious. Thailand's tourism and other service trade both boosted its economic growth, and the output elasticity was respectively 0.46054 and 0.11929. Thailand's transport service trade had an unapparent effect on promoting economic growth, although the output elasticity of transport service is positive, it was not through the significant level test.

From model 3 in table 4, the regression results showed that when regarding the service trade as import and export, China's labor output elasticity was less than its capital's; the capital output elasticity in Thailand is 0.323532, and the labor output elasticity

is negative, which also did not pass the significant level, indicating that Thailand's labor input had an insignificant role in boosting economic growth.

The two countries' import and export of service trade had obvious differences to promote economic growth. The service trade export of China and Thailand promoted economic growth significantly, and the output elasticity of export was similar. But the two countries' service trade import had a significant difference in promoting economic growth. China's service trade import to promote the economic growth is negative, indicating that its economic growth mainly relied on export growth. The output elasticity of Thailand's service trade import was 0.100884, and did not pass the significant level, indicating that it had an unapparent effect on promoting economic growth in Thailand.

From model 4 in table 4, there was a significant difference in the classified import and export of trade in services in China and Thailand to promote economic growth. China's tourism, transport and other services' export had a role in promoting economic growth. The effect on economic growth from China's transport and tourism service trade was not obvious, because the elasticity of their output did not pass the significance level; the output elasticity of other service trade import was negative, showing that it had a negative effect on economic growth. Thailand's transport service trade import, tourism services trade export, other service trade export had a positive effect on economic growth, and the tourism service trade export affected more on Thailand's economy; transport service export had a negative effect; the coefficient of tourism and other service import was not through the significant level test.

4. Comparison of the contribution of service trade to economic growth in China and Thailand

Whether in China or Thailand, export of trade in services could not only have a direct impact on economic growth through affecting gross demand, but also indirectly promote economic growth through the consumption, investment; as for the import of service trade, in the short term, it might have a negative effect on aggregate demand, but the long-term dynamic effect such as technology spillovers, accumulation of human resource and institutional innovation would have a positive effect on economic growth; the total volume of service trade's import and export had a certain degree of impact on economic growth. So there might be a long-term and stable relationship between the stationary variables. Using Johansen co-integration test, and omitting the inspection process, this paper made a conclusion as table 5. There is a long-term stable equilibrium relationship between the

total volume of service trade's import and export, the total volume of import, the total volume of export and GDP, K, L respectively in China.

Variance decomposition analyzed the contribution of every structure's impact to the endogenous variable. Then it further estimated the importance of different structures' shocks, and each variable's contribution to economic growth. This paper built the VAR models on China and Thailand respectively, and decomposed the variance. After extract the contribution of the volume of service trade's import and export, export, import and transport service trade, tourism service trade, other service trade, the results could be seen in table 6 and table 7.

The data in Table 6 showed the contribution that the volume of service trade's import and export boosted China's economic growth went up from 4.32% in the second period to 20.27% in the tenth period, but went down year by year from the elev-

Table 5. The result of correlation variable in the Johansen co-integration test

	T-Statistic	5%Critical Value	Hypothesized No. of CE(s)	The number of co-integration
LnGDPCH, lnKCH, lnLCH, lnXMCH	183.2656	47.85613	None *	3
	79.64023	29.79707	At most 1 *	
	31.2905	15.49471	At most 2 *	
	3.766635	3.841466	At most 3 *	
LnGDPTH, lnKTH, lnLTH, lnXMCH	98.63779	47.85613	None *	4
	49.6405	29.79707	At most 1 *	
	24.31583	15.49471	At most 2 *	
	5.057322	3.841466	At most 3 *	

Table 6. The import and export of China and Thailand the variance Decomposition of their import and export trade (%)

	China			Thailand		
	XMCH	XCH	MCH	XMTH	XTH	MTH
1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	4.328821	1.602464	0.316930	2.086161	1.077652	4.41794
3	4.373214	2.189054	0.287788	1.266998	5.928738	4.100159
4	4.374992	2.256029	0.333849	1.019215	7.649298	4.195354
5	8.958543	4.384102	0.826918	0.997316	7.513449	3.718765
6	13.90075	6.798717	1.262887	1.155571	7.862177	3.873604
7	17.09925	9.176599	1.554115	1.608909	7.821917	4.733446
8	19.03060	11.33086	1.666417	2.176184	7.828213	6.579873
9	19.99954	13.07198	1.666417	2.777337	7.831438	8.477757
10	20.26963	14.49297	1.675701	3.302937	7.976630	9.644518
11	20.16849	15.58660	1.581220	3.715031	8.445625	10.25813
12	19.92579	16.43964	1.531688	4.014405	8.790417	10.46380
13	19.65279	17.09134	1.493782	4.221158	8.982526	10.46172
14	19.40495	17.57084	1.471703	4.360709	9.096044	10.43552
15	19.20448	17.93103	1.467571	4.454051	9.096241	10.44018
16	19.0376	18.21364	1.478946	4.517175	9.051567	10.46886
17	18.87132	18.45752	1.500950	4.560944	9.00870	10.47292
18	18.67895	18.68919	1.527194	4.592572	9.000856	10.43001
19	18.45029	18.92050	1.552328	4.61661	9.031587	10.35973
20	18.18863	19.15432	1.573081	4.635824	9.062188	10.29577

Table 7. The variance Decomposition of the import and export of service trade in China and Thailand(%)

	China			Thailand		
	TCH	TRCH	ELSECH	TTH	TRTH	ELSETH
1	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	12.20347	9.157105	0.071543	5.912394	4.034597	2.060006
3	11.71711	7.857733	0.791446	3.996740	10.65707	3.970005
4	12.42739	5.509410	0.567011	3.231390	15.27683	0.002123
5	13.85798	7.547485	0.926241	2.900787	19.54874	0.004596
6	11.97268	7.740253	0.913227	3.228304	21.38341	0.004568
7	11.75244	7.219431	1.325933	6.221254	20.11669	0.004187
8	11.60341	6.978407	1.707398	12.27594	17.85736	0.003822
9	11.53333	6.857770	1.768469	17.84483	16.44129	0.003643
10	11.33643	6.744479	1.891594	22.25621	15.75769	0.004224
11	10.85456	6.417843	1.871599	25.78418	15.75449	0.005292
12	10.65686	6.182217	1.818672	28.49919	16.19058	0.005831
13	10.49787	6.057727	1.754439	30.15990	16.75099	0.006101
14	10.31302	5.899214	1.675256	30.98714	17.30091	0.006499
15	10.18948	5.743871	1.601960	31.37466	17.80567	0.006883
16	10.04226	5.599506	1.522487	31.52851	18.20624	0.007013
17	9.911625	5.471122	1.447506	31.52034	18.47821	0.007038
18	9.767351	5.350995	1.378149	31.43301	18.65623	0.007076
19	9.606583	5.222453	1.311691	31.32885	18.77538	0.007107
20	9.469536	5.108264	1.252658	31.23932	18.83308	0.007097

ent; the contribution of the volume of service trade export increased year by year from the second period of 1.602%, reaching 19.15432% in the twentieth period; the contribution of the volume of service trade import increased from the second period of 0.32% to the third period of 0.29%, and the period 3 continued to rise, reaching the maximum value of 1.68% in the tenth period. Then it gradually decreased, but started to go up year by year after the sixteenth period.

The data from Thailand showed the contribution that the volume of service trade's import and export boosted its economic growth began to decrease gradually from the second period of 2.086% to the fifth period of 0.997%, but at the beginning of the period 6, it increased year by year, which was just a contrast to the situation of our country; the contribution of the volume of service trade export increased every year from the second period of 1.078%, and there was fluctuations during this period; the contribution of the volume of service trade import decreased from the second period of 4.42% to 3.72% in the third period, and then continued to rise, keeping 10% waving after in the period 10.

Overall, as for the contribution of trade in services, export was more than import. The volume of import and export of service trade as well as service trade export in China contributed to economic growth more than Thailand, but for service trade import, Thailand was higher than Chinese overall. Increasing the volume of import and export of service trade in China

will promote the fast development of the economy, so the development of China's economy was more vulnerable to the impact of the deterioration of the world's environment and the factors such as a financial crisis.

From the classified import and export of service trade to economic growth (in table 7), the contribution that the import and export volume of transport service promoted China's economic growth, declined to the twentieth period of 9.47% from the second period of 12.2%, while it rose a little in the fourth and fifth period; the contribution of the import and export volume of tourism service trade decreased year by year from 9.16% in period 2, which changed as similarly as transport service. The contribution of other service trade in China rose from the second period of 0.07% year by year to the tenth of 1.89%. After a small drop, its contribution maintained around 1% fluctuation.

Next it came to the contribution of service trade classification to Thailand's economic growth of the contribution of import and export volume of Thailand's transport service to its economic growth began to decline from 5.91% in the second period to the fifth of 2.9%, but from the beginning of the fifth period, it increased year by year, reaching 31.23% in the period 20, while there was a little rise in it; the contribution of the import and export volume of tourism service trade went from the second period of 4.03% up to the seventh of 20.12%, and had a small drop subsequent-

ly, but to the twelfth period it began to rise year by year; other service trade import and export contribution to Thailand's economic growth is smaller, which fluctuated below 0.01%.

On the whole, the import and export contribution of Thailand's tourism service trade were more than China, and as for other services (such as trade, communications, finance, insurance, real estate), the import and export contribution to China's growth was more than Thailand. The first 7 periods showed for the import and export contribution of transport service trade to economic growth China was more than Thailand. The following 13 periods were in contrast. Relatively speaking, Thailand should play the role of tourism service on economic growth.

5. Further development suggestions on service trade between China and Thailand

5.1. Improve relevant laws and regulations as well as management system and create a good environment

Different from general merchandise trade, service trade is invisible, and cannot effectively be controlled by simple tariff, and quota. So the healthy and sustainable development of service trade will depend on strict and perfect laws and regulations system. At present, China has promulgated and implemented a number of laws and regulations of service trade, and these Regulations are becoming more and more important. But at the same time, we should also see the existing laws and regulations are too vague, abstract, and there is a conflict between the terms. Therefore, we should strengthen the research on the relevant provisions of WTO, GATS and other service trade. What's more, we need to establish the laws and regulations of service trade development which is in accord with service trade development goals and related international service trade rules as soon as possible.

It is vital to improve and perfect the legal norms in line with the national economic development goals and the rules of international law, and make the principle of service market access, service trade tariffs, the international direct investment, the tax preferential terms in the form of law provisions, and increase the transparency of service trade. In addition to these things, we need to strengthen the management of trade in services, strengthen the government's core position in management, and establish the radiation trade management system which makes the competent authorities of service trade as the axis, and emphasizes the close cooperation between various departments.

5.2. Introduce the foreign capita vigorously and further enhance the opening level of the service trade between China and Thailand

From the estimation results of SUR, it can be seen that capital investment has an apparent effect on the economic growth of China and Thailand. Moreover, from the perspective of the development of goods trade, utilization of foreign capital helps to accelerate economic growth. At present, China and Thailand do not have the independent development of service trade, so they should adhere to the national sovereignty and security, infant industry protection and respect for the basic principles of GATS, gradually broaden the entry conditions, expand the areas of opening up, and according to the specific situation of economic development open up the service trade step by step, guide the foreign capital investment into the service industry. What's more, the increase of foreign direct investment can boost the service industry of our country's capital accumulation, which will make up for the shortage of our domestic construction funds, and promote the growth of investment. At the same time, guiding foreign investment in service industry also provides a chance to learn from foreign companies' advanced technology and management experience, and thus cultivate competition advantages of modern service industry. In addition, increasing foreign direct investment in the service industry, and improving the utilization of foreign investment can improve the technical content of service products and the ability to export. But considering the more long-term, more fundamental aspects, a foreign enterprise may realize the technology spillover effect of foreign capital through demonstration, personnel training and industry forward and backward connection, and thus drive the overall level of technology and the quality of development of the whole social services.

5.3. Consolidate and further develop the traditional service trade and strengthen the emerging service trade development

Compared to other service trades, the labor force and the transport service export of natural resources and the tourism service export have an obvious promoting and long-term sustainable effect, but the traditional service trade has a significant inhibitory effect on economic growth. It shows that on the one hand, with the liberalization of trade in services deepening, traditional service industry (tourism, transportation and so on), especially traditional service trade export has a larger role in promoting economic growth in both of the two countries. Therefore, we should continue to give full play to this advantage and build up our competitive advantage for a long time in the future; on the other hand, traditional service trade import's restricting the economic growth reflects

that emerging service trade import has a stimulating effect on economic growth. Because traditional service trade import plays a smaller role in technological development and human capital accumulation of economic growth, we hardly promote economic growth by stimulating aggregate supply. So from the dynamic point of view, we should expand the import of emerging service trade, upgrade the service trade structure, so as to promote economic growth.

5.4. Make service outsourcing as a new growth point, and optimize the structure of trade in services

With the new-round industrial restructuring the Multi-National Corporations, service outsourcing industry, which has the advantages of low pollution, high value-added, high technology content, low consumption, strong ability to absorb employment and a high level of internationalization, has gradually become an important development form of modern service industry. The expansion of service outsourcing scale increases the number of net export of service in the recipient country, and through a multiplier effect, there is a double effect on national income and output. Specifically, the positive influence of service outsourcing to recipient country is mainly reflected in the following aspects. First, service outsourcing provides more jobs to the recipient country, and in the premise of labor ample, increase the amount of labor input in production activities, which will promote the employment growth. Second, service outsourcing needs a lot of business communication and exchanges between suppliers and customers, and have a stronger knowledge spillover effect with respect to the processing trade in the manufacturing industry. Third, manufacturing outsourcing industry used to consume a large amount of natural resources to a great extent, which is not conducive to the long-term growth of a country's economy, while the consumption of service outsourcing on natural resources is precious little, which can help preserve the ecological environment of undertaking countries and maintain long-term sustainable economic growth. Fourth, the demand for high quality human resources of service outsourcing business decides the enterprise will have more passion on capital investment of training and occupation education, which has a large human capital accumulation effect of the recipient country. In addition, service outsourcing also has a positive role in physical capital, and system improvement, which promotes the economic growth of the recipient country.

So China and Thailand can regard service outsourcing as a new growth point of economic development, and not only attach great importance to in-

dependent innovation, not too dependent on service outsourcing, but also actively develop service outsourcing, fully playing the role of promoting service outsourcing to economic growth.

For the optimization of service trade structure, on the one hand, we need to increase R&D input, ensure the R&D investment growth rate is higher than the GDP growth rate, enhance the ability of cash funding innovation, make corresponding measures, further improve the technology development system, associate the aspects of technology research to technology application, encourage the horizontal cooperation between enterprises, enterprises and universities or research institutions. At the same time, the government should also continue to improve the system of legal protection of intellectual property rights, and create a favorable legal and institutional environment for technological progress; on the other hand, we should continue to adhere to the strategy of strong country through science and education, increase the input level of education. The government, as an educational main investor, need to encourage the diversified social investment, social education, forming the coordinated mechanism of government investment and social investment, so as to improve the quality of service trade from the inside. In addition, we should establish perfect service personnel sending and introduction mechanism, and nurture composite and international students of service industry who can master foreign languages, the practice of international trade, international finance, and international transportation to provide intellectual resources for the optimization of service industry structure. Also, generally speaking, a country's service industry infrastructure is determined by whether it is strong in trade in services. At present, the level of service infrastructure in industry in China and Thailand cannot meet the requirements of the development of high-end service products, which is a big obstacle for the service industry's capital investment. The central and local governments should arrange a certain amount in the budget for investment to give discounts or subsidies of service construction projects, and thus develop and improve services related to the transport facilities, telecommunications facilities, communications network, and so on. Moreover, we should improve the service industry investment environment in accordance with international standards. In the aspect of service industry infrastructure construction funds, other channels need to be made use of to increase services inputs except the government. For instance, banks to offer loans to loan-qualified service enterprises and infrastructure projects, and encourage qualified service enter-

prises to finance in the capital market. Finally, from the experience of the development of service industry developed countries, the development of trade in services is related closely to management trade, and is the government's behaviors in the service trade is so necessary and effective. In the process of service development, a government as a national "big house-keeper", ought to shoulder corresponding responsibilities, create a favorable external environment and system security for service trade development, and promote the development of service trade and the optimization of its structure.

Acknowledgements

The project is supported by National Social Science Foundation of China (15BJY062), and Social Foundation of Fujian Province China (2014B086).

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