International Journal of Global Economics and Management
ISSN: 3005-9690 (Print), ISSN: 3005-8090 (Online) | Volume 4, Number 1, Year 2024
DOI: https://doi.org/10.62051/ijgem.v4n1.25
Journal homepage: https://wepub.org/index.php/IJGEM/index

A Prospective Study on the Economic Effects of China-GCC FTA - Simulation and Analyses Based on GTAP Model

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ABSTRACT

In the context of the "Belt and Road" initiative, this paper is based on the China-GCC FTA negotiations, and uses the Global Trade Analysis Model (GTAP) to construct six scenarios of tariff reduction in key sectors and reduction of technical barriers to trade (TBT) between China and the GCC countries, and to assess the impacts of the construction of the FTA on the economies of China and related countries. The paper shows that increased trade liberalization has a positive economic impact on the China-GCC FTA. At the same time, tariff changes in the manufacturing and oil and gas industries dominated the tariff reductions, but the reduction of technical barriers to trade (TBT) has a particularly significant impact compared to tariffs. Bilateral trade will contribute more remarkably to China's continued economic growth than in the GCC countries. Reductions in trade barriers will effectively boost production demand in Chinese and GCC countries, contributing imports, exports and output, which will benefit both economies, specially, China's trade surpluses increasing particularly in various sectors.

KEYWORDS

GTAP; GCC; Tariffs; Technical barriers to trade; Forward-looking analyses

1. INTRODUCTION

Since the establishment of the GCC (Cooperation Council for the Arab States of the Gulf), China has established diplomatic relations with the GCC and maintained close trade relations. After the 21st century, China's economic development and foreign trade has entered a period of prosperity, under this favourable environment, the bilateral trade volume between China and GCC countries has developed very rapidly. 2004-2008, China's import and export trade volume with GCC countries has increased by about 3.7 times, with an average annual growth rate of 40.93%. Although China's import and export trade with the GCC declined for the first time in the 21st century due to the financial crisis, China's import and export trade with the GCC recovered rapidly in 2010 and continued to expand over the next three years. in 2021, China's trade with the GCC exceeded US$230 billion and China's imports of crude oil from the GCC countries exceeded the 200 million tonne mark. in 2022, the total trade between the two sides reached US$315.8 billion, with a total value of US$1.5 billion. In 2022, total trade will reach $315.8 billion, up 35.6 per cent year-on-year, and in December 2022, the first China-Sea Summit was held, ushering in a new era in the development of China-Sea relations. The summit issued the Joint Declaration of the China-Sea Summit, deciding to establish and strengthen the China-Sea Strategic Partnership, emphasizing the need to promote this relationship into a new era in the political, economic and cultural spheres. At the same time, China's Belt and Road Initiative will facilitate the conclusion of the FTA agreement.In order to further identify feasible options for promoting the deepening of trade between China and the GCC countries, this article analyses the changes in bilateral trade between China and the GCC countries under the influence of tariffs and non-tariff barriers by simulating six scenarios, focusing on the manufacturing industry and the oil and gas industry, which are the industries with large trade volumes, to conduct in-depth research so as to make the article more prospective and practicable.

2. LITERATURE REVIEW

Reviewing the existing literature, Mo CHEN [1], by exploring the economic relationship between China and the GCC, argues that cooperation in the energy sector has become the core of bilateral economic cooperation between China and the GGC countries, as manifested in trade, investment, and construction projects. YANG GUANG [2] After analyzing the current situation of China-GCC trade in energy and goods, Yang Guang argues that China-Hainan economic and trade relations are by no means limited to China's oil dependence on the Gulf States, but rather a strategic and mutually beneficial relationship between the two sides in the fields of economic development and security. Kitou et al. [3], Nomura et al. [4], Francois et al. [5] Scholars analyse the relationship between China and GCC through a number of Free Trade Agreements (FTAs), such as the TPP, the China-Pakistan, and the China-South Korea. Scholars analyse the economic effects of TPP, China-Pakistan, China-Korea and other free trade agreements (FTAs) on China, and believe that the different forms of FTAs do not have the consistency of the direction of the impact on the economy, and the strength of the impact is also very different. Min-Hua Chiang [6] believes that the economic effects of FTAs are affected by a number of factors, such as the history of the interaction between the two countries, the level of the economy, the spatial distance, the trade structure and the relationship with the world powers. Min-Hua Chiang believes that there are many factors affecting the economic effects of free trade zones, such as the history of interaction between two countries, economic level, spatial distance, trade structure, and relations with world powers, etc., and these factors will affect the size of the economic effects of free trade zones.

In terms of empirical analyses, scholars use empirical analyses to prove the impact of technical barriers to trade on bilateral trade, but not the income effect. To this end, scholars construct general equilibrium models such as Global Trade Analysis Project (GTAP) to make predictive and systematic analyses of economic effects. Cheng Lingmin [9] analyses the positive effects of the establishment of China-GCC FTA and the adoption of tariffs, the reduction of technical barriers to trade, and the strengthening of infrastructure for the development of both sides through the construction of the GTAP model and the decomposition of bias effects, which will have an impact on the economies of India, the United States, Japan and other countries. The impact of tariffs on economic effects is diminishing, while the contribution of technical barriers to trade is increasing. She Li and Yang Liqiang [10], Liu Sujun and Li Donglin [11] all point out that the realisation of China-GCC FTA promotes the economic development of bilateral member countries from the perspective of tariffs through the establishment of the GTAP model, and conclude that the higher the degree of trade liberalisation is, the more significant the positive effect on the bilateral economic impact, and the latter also points out that China-GCC FTA will promote the implementation of the "One Belt, One Road" and free trade zone strategies. The latter also points out that the China-Hainan FTA will promote the implementation of the "Belt and Road" and free trade zone strategies, but neither of them conducts an in-depth study on technical barriers to trade.

3. GTAP MODEL SETTING

The GTAP (Global Trade Analysis Project, GTAP) model was developed by Thomas Hurt, a professor at Purdue University in the United States. The standard GTAP model uses perfectly competitive markets, constant returns to scale, etc. as the main assumptions, while each country has only one account, which aggregates all of the country's tax revenues, financial assets, capital and labour income; the two internationals are the national bank and the international transport sector, and the savings of each country are aggregated by the international bank and distributed to each country according to the calculated return on capital. This paper uses the GTAP eleventh edition database, which is based on the 2017 base period.

In this paper, the 160 countries and regions in the database are classified into 15 categories, including China, GCC member countries, countries with close trade with the GCC, such as India and Japan, and current world economic powers, such as the United States. Through the GTAP database, it can be found that the trade between China and the GCC in the manufacturing industry and the oil and gas industry is relatively large, so this paper will take the oil and gas industry and the manufacturing industry as the key industry sectors to simulate and analyse in order to fit the real situation. Finally, the 65 industrial sectors are divided into 11 categories: agriculture, mining, oil and gas, food processing, light industry, heavy industry, electronics manufacturing, machinery manufacturing, public utilities, transport and other industries.

At present, China and the GCC have not yet reached a free trade agreement, so the simulation process in this paper defaults to the base period tariff level as the basis for simulation to reach three different tariff reduction scenarios, at the same time, in order to accurately analyse the economic effects of the establishment of the FTA between China and the GCC, we also carried out a simulation of the decline of technical barriers to trade in three different scenarios, simulation scenarios are set as follows:

Table 1. Simulation scenarios S1-S6 settings

		Change in tariff levels (per cent)			Change in technical barriers to trade (per cent)		
		0 per cent	-50 per cent	-100 per cent	-1 per cent	-5 per cent	-10 per cent
S1	Oil and Gas Industry and Manufacturing		✓				
	Other industries	✓					
S2	Oil and Gas Industry and Manufacturing			✓			
	Other industries	✓					
S3	Oil and Gas Industry and Manufacturing			✓			
	Other industries			✓			
S4	Oil and Gas Industry and Manufacturing			✓	✓		
	Other industries			✓			
S5	Oil and Gas Industry and Manufacturing			✓		✓	
	Other industries			✓			
S6	Oil and Gas Industry and Manufacturing			✓			✓
	Other industries			✓			

4. ANALYSIS OF SIMULATION RESULTS

4.1. Analysis of Tariff Reduction Results

Table 2 shows that the increase in trade liberalisation with tariff reductions between China and the GCC has had an overall positive impact on the economic development of both sides. Due to the different economic levels of different countries, the details are analysed below.

Table 2. Macro data for the S1-S3 simulation scenarios

	GDP (%)			Level of benefits (millions of United States dollars)			Trade balance (millions of United States dollars)			Terms of trade (per cent)		
	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3
sino	0.06	0.13	0.13	2191.68	4384.38	4491.54	-3856.79	-7713.59	-7775.9	0.04	0.08	0.09
Saudi Arabia	0.13	0.25	0.25	244.08	488.16	506.23	-826.37	-1652.74	-1748.78	0.13	0.25	0.25
UAE	0.06	0.12	0.11	483.06	966.13	964.34	-448.63	-897.26	-967.96	0.09	0.19	0.18
Doha	0.14	0.27	0.28	83.21	166.42	172.98	-15.86	-31.72	-46.19	0.13	0.27	0.27
Kuwaiti	0.09	0.18	0.18	62.46	124.91	128.07	-79.59	-159.19	-170.15	0.1	0.2	0.2
Omani	-0.01	-0.01	-0.05	6.92	13.82	7.31	-72.22	-144.43	-144.05	-0.01	-0.02	-0.03
Bahrain	-0.04	-0.07	-0.09	5.36	10.72	8.3	-26.59	-53.19	-56.69	0	0	-0.01

According to the data in the table, with the reduction of tariffs on hydrocarbons and manufacturing, China's GDP growth rate with the rest of the GCC countries, except for Oman and Bahrain, which are weakly negative, has risen to varying degrees, and the terms of trade have also shown an upward trend. In terms of welfare levels, China has grown from 2,191.68 to 4,384.38, and the increase in welfare levels will be conducive to the country's security and stability. For Oman and Bahrain, their own low economic levels make trade changes difficult. Analyzed from the trade balance perspective, the trade deficit of each country increases exponentially. A comparative analysis of the simulation scenarios from S2 to S3 shows that the reduction of tariffs to 0 for all industries has little effect on the increase of each industry indicator in each country. Thus, tariff reductions will bring positive economic effects to both China and the GCC, with the impact of tariff changes in the oil and gas and manufacturing sectors dominating.

4.2. Analysis of the Economic Effects of Changes in Technical Barriers to Trade

S4-S6 analyse the economic effects on China and the GCC countries through the reduction of technical barriers to trade (TBT) in key industry sectors between China and the GCC countries, based on the scenario of full free trade. Since tariffs between China and the GCC are already at a low level, the economic effect of lowering tariffs is limited, while lowering technical barriers to trade will reduce the distortion of the economy, which will play a greater role in improving the trade environment between China and the GCC and promoting the economic level of both sides.

Table 3. Macro data for the S4-S6 simulation scenarios

	GDP (%)			Level of benefits (millions of United States dollars)			Trade balance (millions of United States dollars)			Terms of trade (per cent)		
	S4	S5	S6	S4	S5	S6	S4	S5	S6	S4	S5	S6
sino	0.18	0.37	0.61	6777.28	15920.2	27348.86	-10885.2	-23322.1	-38868.4	0.11	0.21	0.34
Saudi Arabia	0.38	0.92	1.59	970.13	2825.71	5145.19	-1981.43	-2912.01	-4075.23	0.37	0.84	1.42
UAE	0.22	0.66	1.21	1447.34	3384.34	5803.35	-1196.14	-2108.83	-3249.7	0.24	0.48	0.77
Doha	0.37	0.76	1.24	250.42	560.19	947.4	-23.23	68.6	183.39	0.36	0.71	1.14
Kuwaiti	0.35	1.03	1.88	241.52	695.32	1262.57	-201.76	-328.19	-486.23	0.34	0.9	1.59
Omani	0.3	1.72	3.5	159.25	767.03	1526.76	-223.08	-539.19	-934.32	0.31	1.71	3.45
Bahrain	-0.05	0.11	0.31	29.43	113.95	219.61	-69.53	-120.89	-185.1	-0.01	-0.01	0

As shown in Table 3, along with the decline of technical barriers to trade, it is not difficult to see that the GDP and welfare levels of various countries have risen to varying degrees, and the terms of trade have also shown a trend of continuous improvement. Among them, Saudi Arabia's indicators increased most significantly: GDP increased from 0.38% to 1.59%, showing a multiplicative growth, which shows that technical barriers to trade on the overall economic level of Saudi Arabia to play a positive role in promoting. Overall, bilateral trade is crucial to the economic development of China and the GCC countries, and when trade barriers are reduced, the economic level of each country improves, so it is clear that free and open trade is an indispensable condition for the improvement of a country's economic strength.

Table 4. Industry data for the S4-S6 simulation scenarios

		Number of exports (per cent)			Quantity imported (per cent)			Output (per cent)		
		S4	S5	S6	S4	S5	S6	S4	S5	S6
sino	oil and gas industry	2.44	6.46	11.49	0.22	0.12	-0.01	-0.25	-0.77	-1.41
	food processing industry	1.2	0.66	-0.02	0.47	0.87	1.37	0.03	0	-0.03
	light industry	0.2	0.01	-0.21	0.54	1.02	1.63	0.04	-0.02	-0.09
	manufacturing	0.17	0.12	0.06	0.79	1.23	1.78	-0.18	-0.35	-0.56
	electronics manufacturing	-0.46	-0.79	-1.2	0.23	0.5	0.84	-0.33	-0.58	-0.89
	mechanical engineering	0.01	-0.28	-0.64	0.56	1.13	1.83	0	-0.04	-0.11
abbr. for Saudi Arabia Arabian	oil and gas industry	-0.67	-0.74	-0.83	2.2	4.93	8.34	-0.24	-0.23	-0.22
	food processing industry	-3.83	-5.55	-7.69	1.42	2.28	3.35	-1.02	-1.4	-1.88
	light industry	-4.12	-8.22	-13.34	5.17	7.73	10.93	-3.49	-6.13	-9.44
	manufacturing	6.62	9.56	13.24	3.27	5.22	7.67	2.67	3.62	4.8
	electronics manufacturing	-6.53	-15.39	-26.48	2.56	4.64	7.23	-3.08	-6.62	-11.05
	mechanical engineering	-2.45	-4.9	-7.95	2.42	4.04	6.07	-1.72	-2.95	-4.49
UAE	oil and gas industry	0.47	0.86	1.34	0.94	1.52	2.24	0.37	0.66	1.03
	food processing industry	2.73	2.63	2.5	-1.32	-1.18	-1.01	0.08	-0.01	-0.11
	light industry	-2.74	-4.91	-7.61	2.89	3.89	5.14	-3.9	-6.72	-10.25
	manufacturing	1.97	2.58	3.34	1.06	1.68	2.45	0.66	0.66	0.66
	electronics manufacturing	-1.28	-1.84	-2.53	0.56	0.81	1.11	-1.53	-2.93	-4.68
	mechanical engineering	-0.79	-0.75	-0.71	0.89	1.5	2.26	-1.01	-1.4	-1.89
Doha	oil and gas industry	-0.04	0.05	0.17	6.5	10.93	16.47	0	0.09	0.21
	food processing industry	-1.8	-1.96	-2.17	0.57	0.88	1.26	-0.32	-0.39	-0.48
	light industry	-3.86	-7.11	-11.17	3.06	4.65	6.63	-1.39	-2.38	-3.6
	manufacturing	3.68	5.23	7.17	2.36	3.58	5.11	1.31	1.73	2.26
	electronics manufacturing	-2.81	-5.49	-8.84	0.71	1.19	1.79	-1.4	-2.79	-4.53
	mechanical engineering	-2.82	-4.96	-7.63	1.66	2.82	4.27	-0.57	-0.92	-1.35
Kuwaiti	oil and gas industry	-0.28	-0.38	-0.51	1.06	3.09	5.61	-0.13	-0.2	-0.28
	food processing industry	-1.79	-2.9	-4.3	0.34	0.79	1.36	-0.55	-0.94	-1.42
	light industry	-7.01	-13.26	-21.07	2.07	3.22	4.65	-3.26	-6.06	-9.56
	manufacturing	7.19	11.29	16.42	2.12	3.58	5.41	2.41	3.46	4.78
	electronics manufacturing	-4.92	-14.64	-26.79	0.66	1.24	1.98	-2.58	-7.02	-12.56
	mechanical engineering	-1.9	-4.93	-8.72	1.07	1.98	3.12	-1.7	-3.56	-5.88
Omani	oil and gas industry	-0.05	1.2	2.76	1.04	7.45	15.46	0.02	0.67	1.48
	food processing industry	-1.74	-4.11	-7.06	0.2	0.7	1.33	-1.1	-2.63	-4.55
	light industry	-5.06	-13.31	-23.61	1.72	3.58	5.92	-2.6	-6.16	-10.61
	manufacturing	2.2	-0.19	-3.17	1.2	2.33	3.74	0.67	-1.87	-5.05
	electronics manufacturing	-4.41	-16.37	-31.32	0.87	2.31	4.12	-2.86	-9.34	-17.44
	mechanical engineering	-1.34	-6.5	-12.94	0.59	1.71	3.1	-1.22	-4.36	-8.29
Bahrain	oil and gas industry	-0.15	-0.86	-1.75	-0.18	-1.35	-2.82	0.04	-0.07	-0.21
	food processing industry	-0.65	-0.32	0.08	0.27	0.33	0.4	-0.55	-0.36	-0.13
	light industry	-5.65	-9.82	-15.03	2.17	2.86	3.73	-4.03	-6.96	-10.62
	manufacturing	0.5	0.85	1.28	0.58	0.68	0.81	-0.26	-0.45	-0.69
	electronics manufacturing	-2.4	-6.18	-10.89	0.42	0.54	0.7	-2.05	-5.63	-10.11
	mechanical engineering	8.64	13.27	19.04	0.95	1.39	1.93	4.08	6.17	8.78

As a large manufacturing country, China has a large number of exports in manufacturing industries such as food processing, light industry, heavy industry, electronics manufacturing and machinery manufacturing, while the GCC countries have almost no manufacturing industry and are highly dependent on imports of industrial goods, and the two sides have very strong economic complementarities. However, according to the data in the table, in the scenario shift from S4-S6, the export quantity of China's manufacturing industry has shown a downward trend, in which the decline in the export quantity of electronic manufacturing industry has gradually increased, up to -1.2%, analysing the reason for this is that, on the one hand, the manufacturing industry of each country has been developed in recent years, and the dependence on the outside world has decreased, and on the other hand, it may be due to the fact that the GCC countries have certain comparative advantages in terms of petroleum resources. On the other hand, it may be due to the fact that GCC countries have certain comparative advantages in oil resources. At the same time, the reduction of technical barriers to trade has led to an even greater increase in manufacturing imports compared with the simple reduction of tariffs to zero for all industries in S3, with Saudi Arabia's imports of light industry increasing from 4.53 per cent to 10.93 per cent, or nearly three times as much.

Finally, in terms of total output, the continuous reduction of technical barriers to trade has led to positive growth in the output of most industries in countries such as Oman, Bahrain and Kuwait, which shows that freer and more open trade between China and the GCC has undoubtedly brought about a positive economic effect for both sides, and realized the advantages of complementing the resources of China and the GCC.

4.3. Impact of the Reduction of Technical Barriers to Trade on the Countries of Mutual Trade Co-Operation

As can be seen from Table 5, the overall macroeconomic impact on China and the major GCC trading countries after the three scenarios S4-S6 are reached is negative to varying degrees, and worsens to some extent with the gradual reduction of technical barriers to trade. This is because full trade liberalization between China and the GCC will lead to a greater shift of products and services that should be provided by other trading countries to China and bilateral trade within the GCC, and the situation faced by other countries will become progressively more severe as the degree of trade liberalization in the key industries of China and the GCC, i.e., hydrocarbons, and the manufacturing industry, rises gradually. Due to the large trade diversion effect, it is expected that the successful signing of a liberalized trade agreement between China and the GCC will have a certain negative impact on the economic and trade situation of other trading countries, and may stimulate more countries and regions to establish friendly relations with China and the GCC in order to avoid trade diversion effects.

Table 5. Economic effects on countries trading on both sides of the China-Hainan border under the S4-S6 simulation scenarios

		India	Georgia	United States of America	Japanese	EU	its Asian counterpart other countries
GDP (%)	S4	-0.14	-0.03	-0.04	-0.05	-0.05	-0.06
	S5	-0.25	-0.13	-0.09	-0.11	-0.09	-0.12
	S6	-0.4	-0.24	-0.15	-0.17	-0.14	-0.2
trade balance (Millions of United States dollars)	S4	934.78	236.34	2839.97	1378.28	3408.97	1700.78
	S5	1894.84	576.85	5827.77	2810.12	6295.94	3454.08
	S6	3094.91	1002.49	9562.53	4599.94	9904.66	5670.46
Imports (per cent)	S4	-0.22	-0.05	-0.07	-0.13	-0.02	-0.09
	S5	-0.43	-0.18	-0.16	-0.27	-0.03	-0.21
	S6	-0.7	-0.34	-0.26	-0.45	-0.05	-0.36
Exports (per cent)	S4	0.09	0.04	0.06	0.1	0.05	0.02
	S5	0.18	0.13	0.13	0.19	0.09	0.02
	S6	0.28	0.25	0.2	0.31	0.14	0.02
Terms of trade (per cent)	S4	-0.13	-0.01	-0.03	-0.07	-0.01	-0.05
	S5	-0.24	-0.11	-0.07	-0.14	-0.02	-0.11
	S6	-0.39	-0.23	-0.11	-0.22	-0.03	-0.18

5. CONCLUSION

This paper uses empirical analyses to study the different economic effects on China and the GCC countries in the case of tariff and technical barriers to trade reductions. The results of the study show that the reduction of tariffs on both sides of the economic effects of a positive impact, including oil and gas, manufacturing tariff reduction effects account for the main position, but the overall view of tariff reductions for all aspects of the impact of the increase is not large, while the decline in technical barriers to trade is not only on the bilateral economic and trade cooperation is relatively significant contribution to the economic and trade cooperation, and at the same time favourable to the economic development of the other countries concerned. Therefore, on the one hand, China itself should establish perfect technical barriers to trade, and strengthen the technological upgrading of related industries, especially oil and natural gas industries, to deepen the cooperation in the field of energy; actively docking and strengthening the requirements of technical and safety standards of the Gulf States, especially for the technical trade relief sensitive machinery manufacturing, light industry and other manufacturing industries, and to further accelerate the sustainable development of bilateral trade, and to promote the sustainable development of bilateral trade. China-Gulf negotiations with a clear goal of technical barriers to trade. Secondly, the large geographical distance between China and the GCC member states will increase the difficulty and cost of trade. Therefore, it is necessary to respond to the "Belt and Road" initiative, continue to strengthen infrastructure construction, and enhance the degree of China-GCC connectivity.

REFERENCES

[1] Mo CHEN. Exploring Economic Relations between China and the GCC States. [J]. Journal of Middle Eastern and Islamic Studies (in Asia), 2011, Volume 5, Issue 4, PP. 88-105.

[2] Yang Guang. China's strategic and mutually beneficial economic and trade relations with the Gulf countries [J]. International Economic Review, 2014, Issue 3: 101-109.

[3] Kitou E. & G. Philippidis. A Quantitative Economic Assessment of a Canada-EU Comprehensive Economic Trade Assessment [J]. Thirteenth Annual Conference on Global Economic Analysis, 2010: 9-11.

[4] Nomura R., Ohkawa T., Okamura M., et al. Does a Bilateral FTA Pave the Way for Multilateral Free Trade? [J]. Review of International Economics, 2013, 21(1): 164-176.

[5] Francois J., Manchin M., Norberg H., et al. Reducing Transatlantic Barriers to Trade and Investment: An Economic Assessment [R]. Institute for International and Development Economics, 2013.

[6] Min-Hua Chiang. East Asia: An International Quarterly [J], 2019, Volume 36, Issue 4, PP. 271-290.

[7] OECD. An Assessment of the Cost for International Trade in Meeting Regulatory Requirements. TD/TC/WP (99)8/FINAL, Puris: OECD, 1999.

[8] Otsuki, T., J.S. Wilson, M. Sewadeh. What price precaution? European harmonisation of aflatoxin regulations and African groundnut exports [J]. European Review of Agricultural Economics, 2001, 28(2): 263-283.

[9] Cheng Lingmin. Study on the Economic Effects of China-GCC Free Trade Agreement - Based on GTAP Model and Bias Effect Decomposition [D]. Guizhou Province: Guizhou University of Finance and Economics, 2020.0-70.

[10] SHE Li, YANG Liqiang. GTAP simulation analysis of the impact of China-GCC FTA on bilateral trade [J]. Asia-Pacific Economy, 2012, 06 Issue: 37-41.

[11] Liu Sujun, Li Donglin. Research on the economic effect of China-GCC FTA under the perspective of "Belt and Road" - Simulation analysis based on GTAP [J]. Industrial Technology and Economics, 2017, No. 9 (Total 287): 137-145.

[12] Yang Shaoyan, Li Juan. The economic impact of technical barriers to trade on the establishment of FTA between China and GCC - A simulation study based on the GTAP model [J]. Asia-Pacific Economy, 2019, 05 Issue: 14-23+149.

[13] Wang Guozhi, Ge Yanzhao. Analysis of the economic and trade basis and expected effects of the establishment of China-GCC FTA [J]. Research on Indian Ocean Economies, 2017(05): 99-122+140-141.