

Full length research paper

Economic globalization, trade gap and the role of China

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This paper analyzes the foreign trade gap between 36 countries and regions and the role China plays from 1978 to 2007. The paper finds that the absolute gap among those countries increase, but the relative gap decrease, the gap between the developing and the developed decrease, the inter-regional gap of the developed is bigger than the developing. The risk of foreign trade gap between the countries decreases. China has played a significant role in the expansion of foreign trade gaps between countries and regions. So it's necessary for China to change the model of foreign trade.

Keywords: Economic globalization; Foreign trade gap; Countries and Regions; China

Introduction

Different countries have different attitudes towards economic globalization. Some countries are participating in economic globalization and some other countries are against economic globalization. There are a lot of researchers are arguing about the effect of economic globalization on economics, society, environment and so on. One of the key questions is the effect of economic globalization on the income gap between countries. There have a lot of valuable research findings on gap of economic development and gap of income between countries, but there is a lack of research on foreign trade gap. International trade is crucial to economic globalization and it is also the engine of economic development. Most countries in the world participate in international trade by the means of joining trade system, regional cooperation and reform of economy system. Considering of international background, it is of importance to deeply analyze the gaps of foreign trade between countries. This question is meaningful to the theory and practice. Well, is the foreign trade gap increasing or decreasing? How did the gap develop? Is the change of foreign trade gap between developed countries and that between developing countries different? What is the trend of gap of interior and exterior

countries in different regions? What's more, what is the effect of China's foreign trade to other countries' foreign trade? Will it increase or decrease inter-regional gaps? This paper will focus on these questions. This paper will do research on foreign trade gap in 36 countries and regions with the data from 1978-2007 and some methods in different subject.

Research methods and data source

Overall gap index: S index and V index

(1) Absolute gap index (S index)——standard deviation:

(2) Relative gap index (V index)——index of

variability:
$$V = \frac{S}{\bar{X}} = \frac{\sqrt{\sum_{i=1}^N (X_i - \bar{X})^2 / N}}{\bar{X}}$$
 In equation (1)

and (2), S is standard deviation. V is index of

variability. X_i is foreign trade volume of country i . \bar{X} is average foreign trade volume of all the

$$\bar{X} = \frac{\sum_{i=1}^n X_i}{N}$$

countries in a year, and its equation is $\bar{X} = \frac{\sum_{i=1}^n X_i}{N}$. N is the number of countries. The bigger standard deviation

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and index of variability is, the larger regional gaps of foreign trade are.

Gaps decomposition index: I index

This paper use Hill index to analyze regional gaps of foreign trade. According to Hill index's prime formula, decomposition formula and its intension, considering the research objectives of this paper, this paper uses the number of countries to replace the demographic variable and uses gross foreign trade value to replace income variable in the decomposition formula. And the Hill index turns into (H.Theil,1967; Houkai

Wei,1996)
$$I = \frac{1}{N} \sum_{i=1}^N \log \frac{\bar{X}}{X_i}$$
 In this equation, N is the number of countries. X_i is the foreign trade volume of country i in a year. \bar{X} is the average foreign trade volume of all the countries. If the countries in the world are divided into G parts, then the decomposition formula is

$$I = \sum_{g=1}^G \frac{N_g}{N} I_g + \sum_{g=1}^G \frac{N_g}{N} \log \frac{(N_g / N)}{(X_g / X)}$$

In this equation, g stands for group g . I_g stands for the interior gaps in group g . N_g stands for the number of countries in group g . X_g stands for the foreign trade volume of countries in group g . X stands for the foreign trade volume of all the countries (Schwarze,1996; Cai and Du, 2000). The first part of this equation stands for interior foreign trade gap in a region, and the second part of this equation stands for the inter-region foreign trade gap.

Development level gap index: Q index

According to the meaning of economic location entropy index, this paper constructs foreign trade location entropy index and the formula is:

$$Q_i = \frac{X_i / \sum_{i=1}^N X_i}{GDP_i / \sum_{i=1}^N GDP_i}$$

In this equation, Q_i stands for location entropy index, X_i stand for the foreign trade

volume of country i in a year, GDP_i stands for the GDP of country i , N stands for the number of countries. The upper part of the formula stands for proportion of country i 's foreign trade amounting in the total foreign trade volume. The lower parts of the formula stands for proportion of country i 's GDP amounting in the total GDP of all the countries, Q_i stands for the ratio of the upper part and lower part (Cui et al., 2005). The larger Q_i is, the more prosperous country i 's foreign trade is, and the smaller Q_i is, the less prosperous country i 's foreign trade

is. This paper supposes that $\bar{Q} = \sum_{i=1}^N Q_i / N$ stands for the average foreign trade location entropy index of all the countries. If $Q_i > \bar{Q}$ and $Q_i > 1$, it means that this region's foreign trade takes the lead in the countries. If $\bar{Q} < Q_i < 1$, it means that this region's foreign trade is average. If $Q_i < \bar{Q}$ and $Q_i < 1$, it means that this region's foreign trade falls behind the majority. According to this standard, all the countries can be divided into several groups.

Gaps risk index: G index

Considering the research objectives, this paper selects the following computing method:

$$G = \frac{N+1}{N} - \frac{2}{N^2 \bar{X}} \sum_{i=1}^N (N+1-i) X_i$$

G stands for Gini coefficient, N stands for the number of countries, X_i stands for the foreign trade of country i , \bar{X} stands for average foreign trade volume and it is defined as following:

$$\bar{X} = \frac{1}{N} \sum_{i=1}^N X_i$$

Note that when we are using this formula to calculate, we should order the foreign trade volume from low to high, ensuring that the weight of country with large foreign trade volume is small and the weight of country with small foreign trade volume is large (Sen,1973; Fei and Rains,1974; Fei,Rains,Kuo,1979).

Data resource and research angle

This paper collects the foreign trade data of all the countries during 1978-2007 from WTO statistics database and UNCTAD database. GDP of all the countries during 1978-2007 is collected from UNCTAD database. Global trade consists of goods trade and service trade, but this paper only analyzes goods trade, which is predominating in global trade.

Research angle

This paper not only estimates the foreign trade gap in 36 countries, but also estimates the interior and exterior foreign trade gap in American countries, Asian countries, and European countries. According to their economy status, this paper divides the 36 countries into developed countries and developing countries by the World Bank's standard. After the division, this paper estimates the interior and exterior foreign trade gap and also measures the China's effect on the change of foreign trade gap between countries.

Considering historical reasons, the data of Russia during 1978-1991 adopts the data of the Soviet Union, the data of Czech during 1978-1992 adopts the data of Czechoslovakia, the data of Belgium and Luxembourg during 1978-2001 adopts joint statistical data. What's more, considering the research objective of this paper, the basis of selecting countries is as follows: first of all, we select the top 30 countries according to the export and import data collected from WTO database in 2007. Considering the global trade of Saudi Arabia and United Arab Emirates is dependent on petrol export, the two countries are rejected and Norway and Indonesia are added in the list. Considering the effect of European Union, we added the other 6 countries in EU in the list, and the 6 countries included Denmark, Luxembourg, Greece, Ireland, Portugal and Finland. The number of countries is 36. In 2007, the foreign trade volume of the 36 countries takes up 84.8% of the world's foreign trade volume, and then the 36 countries are representative.

This paper estimates the foreign trade gap of 36 countries. Considering the foreign trade volume of American countries (USA, Canada, Mexico and Brazil) takes up 17.35% of the world's foreign trade volume, the foreign trade volume of Asian countries (China, Hong Kong, Taiwan, Japan, Republic of Korea, Singapore, India, Malaysia, Thailand, and Indonesia) takes up 25.68% of the world's foreign trade volume, the foreign trade volume of European countries (Germany, France, Britain, the Netherlands, Italy, Belgium, Spain, Russia, Switzerland, Austria, Sweden, Poland, Turkey, the Czech republic, Norway, Ireland, Denmark, Finland, Portugal, Greece, Luxembourg) takes up 41.27% of the world's foreign trade volume, we estimate the interior foreign trade gap and exterior foreign trade gap of the 3 continents.

Considering the level of development, the 36 countries are divided into developed countries (The United States, Canada, Hong Kong, China, Taiwan, Japan, Korea, Singapore, Germany, France, Britain, the Netherlands, Italy, Belgium, Spain, Switzerland, Austria, Sweden, the Czech Republic, Norway, Ireland, Denmark, Finland, Portugal, Greece, Luxembourg, and Australia) and developing countries (China, Russia, Mexico, Brazil, India, Malaysia, Thailand, Indonesia, Poland and Turkey) according to the World Bank's standard. This paper estimates the interior foreign trade gap and exterior foreign trade gap, and also analyzes China's effect.

This paper mainly analyzes the history, trend and reason of 36 countries' foreign trade gap during 1978-2007, and it also discusses the role and effect of China. In the following text, the number of 36 implies 36 countries we selected and the number of 35 implies other 35 countries except China.

Analysis of foreign trade gaps between countries

The absolute gap between countries with S index

On the whole, during 1978-2007, the S index of the 36 countries' foreign trade absolute gap was increasing, which means the foreign trade absolute gap between these countries was increasing. In 1978, the foreign trade absolute gap between 36 countries was 73 billion dollars, and in 2007 the gap was 672 billion dollars. The absolute gap increased by 9.1 times in 30 years, and it means that the absolute gap between 36 countries was increasingly clear. Seeing from the rate of change, S index was increasing, but it increased faster after 2000. In 1978-1984, absolute gap was increasing slowly, and the average annual increase was 5 billion dollars. In 1985-2000, the average annual increase was 16 billion dollars. In 2001-2007, the absolute gap was increasing rapidly and the average annual increase was 45 billion dollars. We can arrive at a conclusion that the foreign trade absolute gap between countries will increase more rapidly as economic globalization constantly moves into depth. The increase of foreign trade gap was caused by many factors, for example, gap of history of reform and open policy, gap of industrial base and foreign trade base, gap of location advantage, and gap of attitude towards attending economic globalization.

In Figure 1, there have two curves, one stands for absolute gap between 36 countries, and the other one stands for absolute gap between 35 countries without China. In Figure 1, we can find that the two curves were almost the same during 1978-2002, but after 2002, the curve of 36 countries is higher than the curve of 35 countries, which means that China's effect in increasing foreign trade gap was increasing. The main reason was that China joins the WTO, and China's foreign trade was increasing more rapidly than other countries.

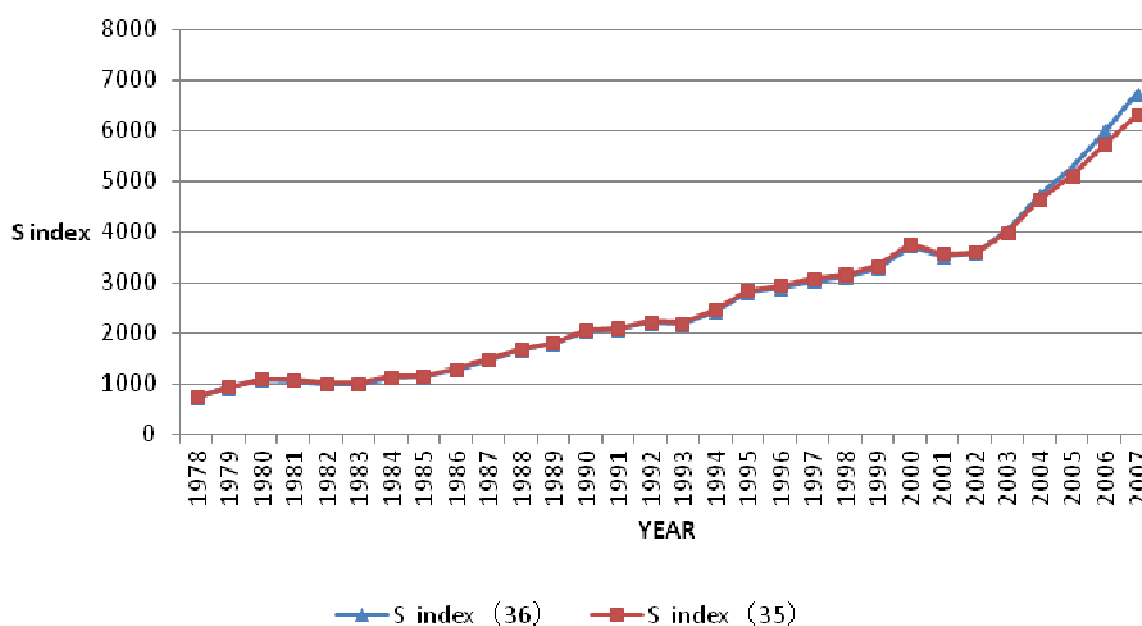


Figure 1. S index of foreign trade gap

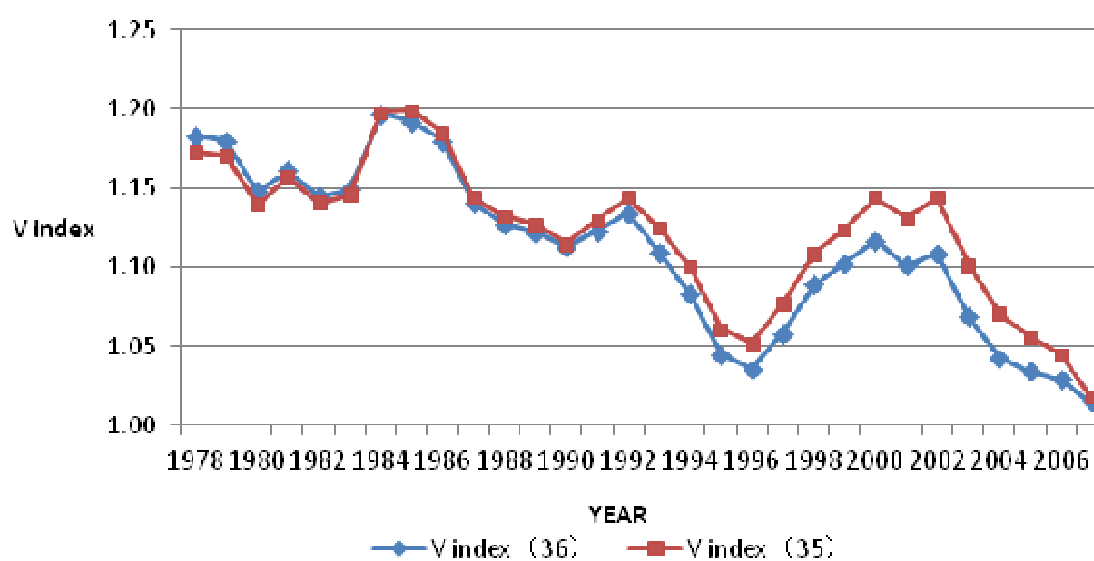


Figure 2. V index of foreign trade gap

In 2002, China's foreign trade volume was 620 billion dollars. In 2007, China's foreign trade volume was 2,173 billion dollars, and the average annual growth rate of China's trade during 2002-2007 was 23.2% and that of other countries was 12%, which was only half of the China's average annual growth rate. In Figure 2, the trend of V index was contrary to that of S index. During 1978-2007, the V index was decreasing volatility. In 1978, the V index was 1.183, and in 2007, the V index was 1.015,

which means the foreign trade relative gap of 36 countries was decreasing. During 1978-2007, the foreign trade relative gap can be divided into four stages: (1) During 1978-1984, the trend of V index showed U-curve, which means the foreign trade relative gap first increased and then declined. (2) During 1985-1996, the V index was decreasing, which means foreign trade relative gap between countries was reducing. (3) During 1997-2000, the V index was increasing, which means foreign trade

relative gap was increasing. (4) During 2000-2007, the V index was declining, which means the foreign trade relative gap was reducing.

In Figure 2, the curve of 35 countries without China was below the curve of 36 countries during 1978-1982, this demonstrates that China was participating in international division of labor actively and China strove to develop international trade and expanded the foreign trade relative gap between countries, which means China played a negative role in reducing the foreign trade relative gap. During 1982-1991, the two curves were almost the same, and most countries were undergoing revival and redevelop, the role of China was not obvious. During 1991-2007, the curve of 35 countries was below that of 36 countries, and China helped to reduce the foreign trade relative gap, which means China plays a positive role in reducing the foreign trade relative gap between countries. After 2001, the two curves start converging, it demonstrates that the role of China in reducing the foreign trade relative gap was decreasing. It also demonstrates that other countries' foreign trade was developing rapidly, and the foreign trade relative gap between countries may start converging. On the whole, from 1984, the development of China's foreign trade helped to reduce the foreign trade relative gap between countries, and its effect was highlighting. China's effect reached a maximum in 2001 and its effect was reducing after that.

Analysis of America foreign trade, Europe foreign trade, the relative gap between countries with V index trade and Asia foreign trade

Interior gap of the three continent's foreign trade with I index

On the whole, interior gap of America foreign trade was biggest, interior gap of European foreign trade takes the second place, and interior gap of Asian foreign trade was smallest. All the interior gap of foreign trade was decreasing. In the view of each continent:

(1) The interior gap of foreign trade in American countries was biggest, but the gap was decreasing. During 1978-1991, I index was between 0.25 and 0.3, and I index was decreasing except 1980-1984, which means the interior gap in American countries were reducing.

(2) The interior gap of foreign trade in European countries was in the second, and the gap was decreasing in ripples. During 1978-2007, the gap was between 0.229 and 0.175, this situation was caused by several factors, for example, European integration which helped to remove trade barriers and promote trade exchange, what's more, the synergy among countries also helped to reduce trade development gap. Germany, France, the Netherlands, Belgium, Italy, Britain were trade partners, and there was intra industry trade among these countries.

For example, the core trade partners of German were mainly European countries, and the top five countries of German were France, the United States, Britain, Italy, and the Netherlands. Industries complementary promote the coordinated development of European countries.

(3) The interior gap of foreign trade in Asian countries was the smallest. During 1978-2007, I index was almost decreasing as a whole. In 2000, I index was the smallest, and its value was 0.096. After 2000, it developed steadily and it was increasing slowly. In 2007, I index was 0.11. Because I index was small and it was increasing slowly, the trend demonstrated that the Asian countries were developing balanced. In Figure 3, the curve of 36 countries almost keeps the same gap with the curve without China before 2001. The curve without China was higher than the curve of 36 countries. The trend demonstrates that China helped reduce interior gap of foreign trade among Asian countries before 2001, but the curve including China was increasing and the curve without China was decreasing after 2001. This trend demonstrates that China expanded interior gap of foreign trade among Asian countries after 2001. This was caused by the rapid development of China's foreign trade after participating in WTO. China's increasing speed in foreign trade was faster than any other Asian countries. From 2002 to 2007, China's foreign trade has increased by 2.5 times and grown from 4% to 9% of the world total foreign trade.

Exterior gap of the three continents' foreign trade with I index

I index of foreign trade gap in 3 continents was declining. In 1978, I index was 0.243, in 1996, I index falls to 0.178 and it was 0.175 in 2007. We can find that foreign trade gap in American, European and Asian regions were declining.

The gap included interior gap which means the gap between countries and exterior gap which means gap between continents. In Figure 4, we can reach a conclusion: (1) the interior gap of the three continents was predominant, and the interior gap was reducing slowly. From 1978 to 1997, I index changes from 0.214 to 0.158, and it was 0.159 in 2007. From proportion perspective, the proportion that interior gap in total gap was more than 85% since 1978, and it was 91% since 2007. The interior gap mainly caused by the interior gap of American and European regions. (2) The exterior gap of the three continents was declining. I index of exterior gap changed from 0.029 to 0.013 during 1978-1995. In 2000, I index was 0.028, but it decreased after that and it was 0.016 in 2007. From proportion perspective, the proportion was less than 15% since 1978. We can find that the total gap of American, European and Asian foreign trade mainly appeared as interior gap which was about 90%, and the exterior gap was not obvious.

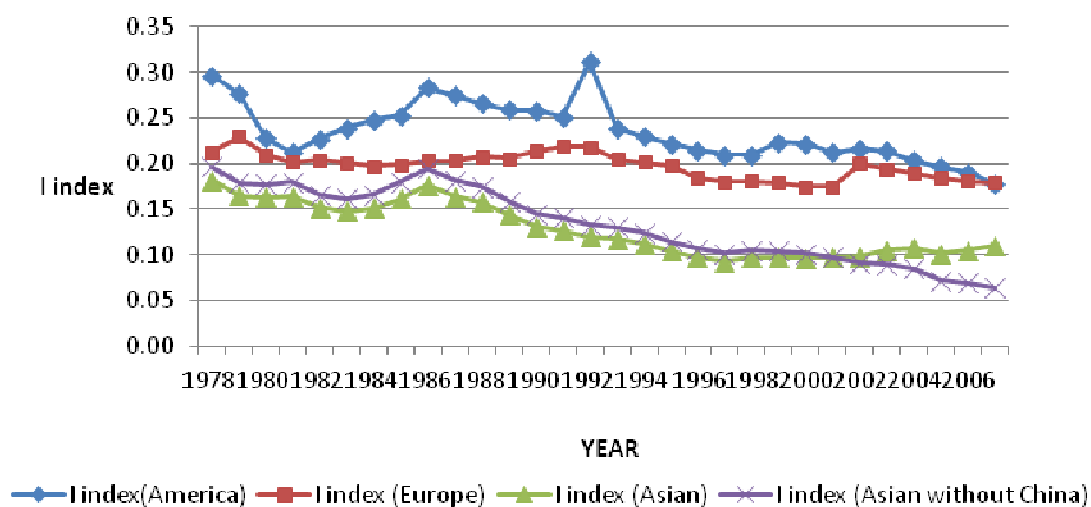


Figure 3. I index of American, European and Asian countries

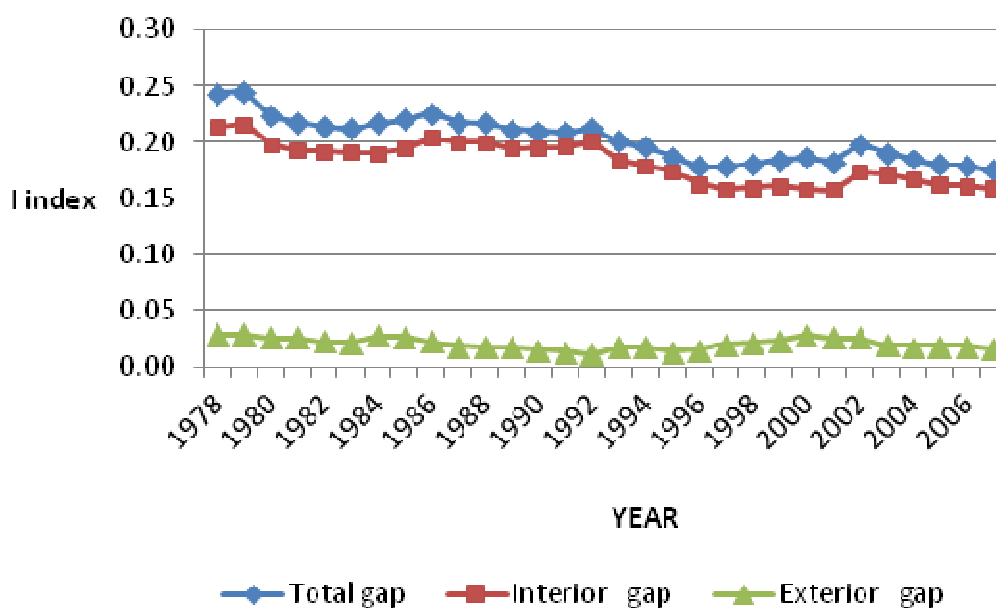


Figure 4. index of foreign trade gap of American, European and Asian countries

From 1978 to 2007, the total gap of American, European and Asian foreign trade was decreasing steadily as a whole.

The foreign trade gap of developed countries and developing countries with I index

The foreign trade interior gap with I index

On the whole, interior gap of developed countries was greater than that of developing countries. From a regional

perspective, we can reach a conclusion that: (1) the foreign trade interior gap of 26 developed countries was great, but the gap developed steadily. (2) The foreign trade interior gap of 10 developing countries was fluctuating greatly. During 1978-1986, I index was fluctuating. During 1987-1991, I index changed from 0.122 to 0.043. During 1992-2000, I index was steady. I index was increasing after 2001, and it was 0.188 in 2007 (See Figure 5). The role of China changed greatly in the gap of 10 developing countries. During 1978-1990, the curve without China was above the curve including

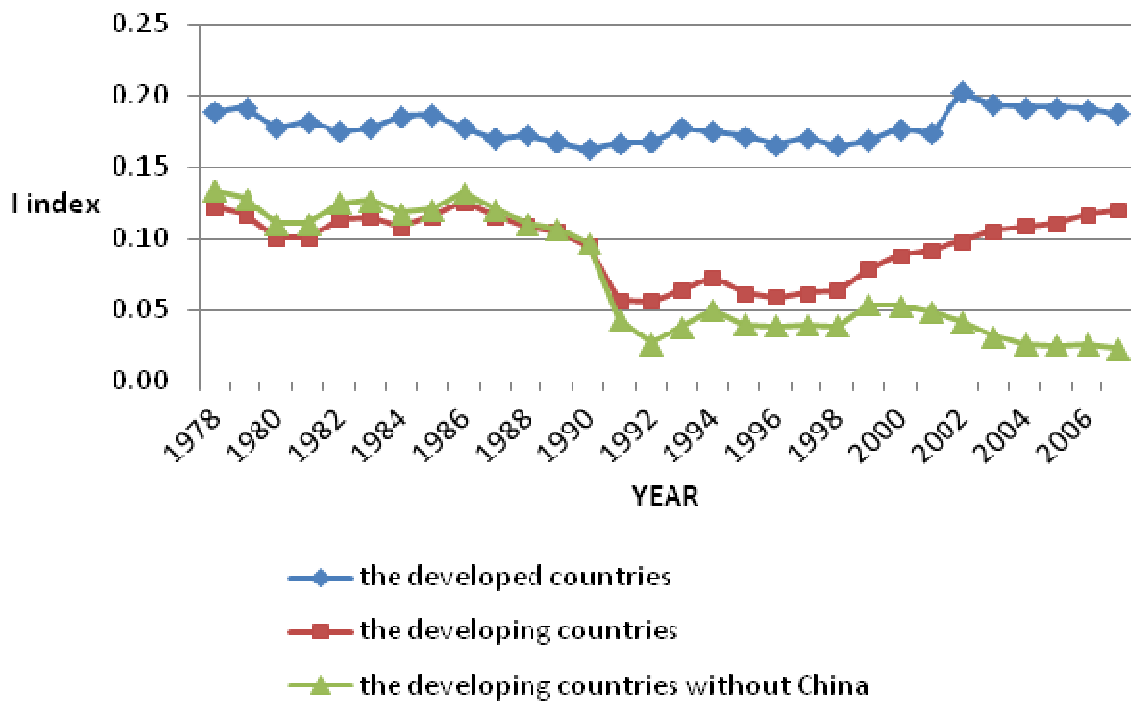


Figure 5. I index of the developed countries and the developing countries

China, and their trends were consistent. During 1991-2007, the curve without China was under the curve including China, and their trends were consistent before 2000. During 2000-2007, the curve including China was increasing greatly, and the curve without China was decreasing obviously. We reach a conclusion that China helped to reduce foreign trade gap of developing countries before 1991, and China contributed to increase foreign trade gap of developing countries after 1991. This situation was mainly caused by the rapid development of China's foreign trade since the early 1990, and after China participated in WTO, its foreign trade developed even greater. China's foreign trade ranked 26 in 1980, and ranked 3 in 2004. During 1980-2005, China's exports accounted for proportion of world's export increased from less than 1% to 6%, and its exports accounted for proportion of developing countries' export increased from 3% to 20%. This situation contributed to the increase of foreign trade gap between China and other developing countries.

The foreign trade gap with I index

On the whole, I index of foreign trade gap was slightly but consistently declining. In 1978, I index was 0.215, it fell to 0.174 in 1996. In 2007, I index was 0.173. We can reach a conclusion that the foreign trade gap between developed countries and developing countries was converging, and the gap was reducing.

In Figure 6, we can reach some conclusions about the foreign trade gap of developed countries and developing countries.(1) The interior gap was predominant in the total role. I index of the foreign trade interior gap of two regions fell from 0.169 to 0.133 during 1978-1992. During 1993-1998, I index was fluctuating between 0.134 and 0.144, started to ascend since 1999 and reached its maximum which was 0.194 in 2002. After 2002, it started to fluctuate steadily. In the proportion respect, the proportion ascended from 78.60% to 81.30% during 1978-1985. Since 1986, it started to fell and reached to 65.70% in 1992, and then started to ascend to 96.80% in 2007. That's to say, the foreign trade gap of developed countries and developing countries were mainly caused by the interior gap of the two regions. (2) The exterior gap was playing a less important role in the total gap. In the numerical value view, I index of exterior gap fell from 0.046 to 0.038 during 1978-1985, and it started to increase slowly after that. In 1992, it was 0.07, but then it declined to 0.006 in 2007. In the proportion view, interior gap fell from 21.40% to 17.50% during 1978-1983, and then it increased to 34.30% in 1992. The proportion started to decrease since 1992, and it was only 3.20% in 2007.

In conclusion, during 1978-2007, the total gap of foreign trade of developed countries and developing countries were mainly caused by the interior gap of both regions. The interior gap of developed countries was greater than that of developing countries. The gap between developed countries and developing countries

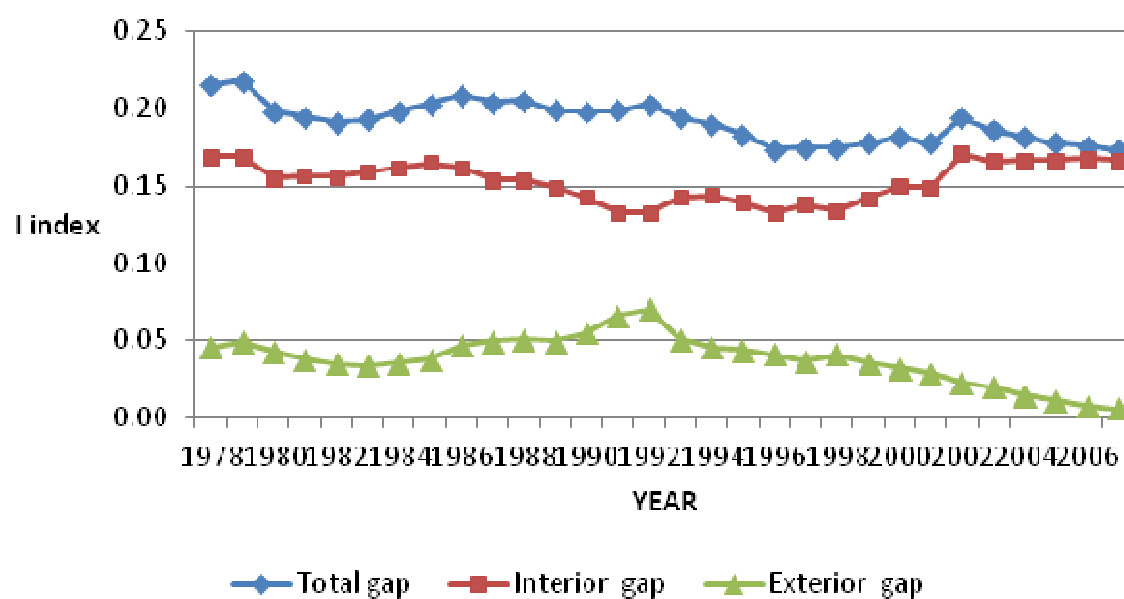


Figure 6. I index of foreign trade gap of the developed countries and the developing countries

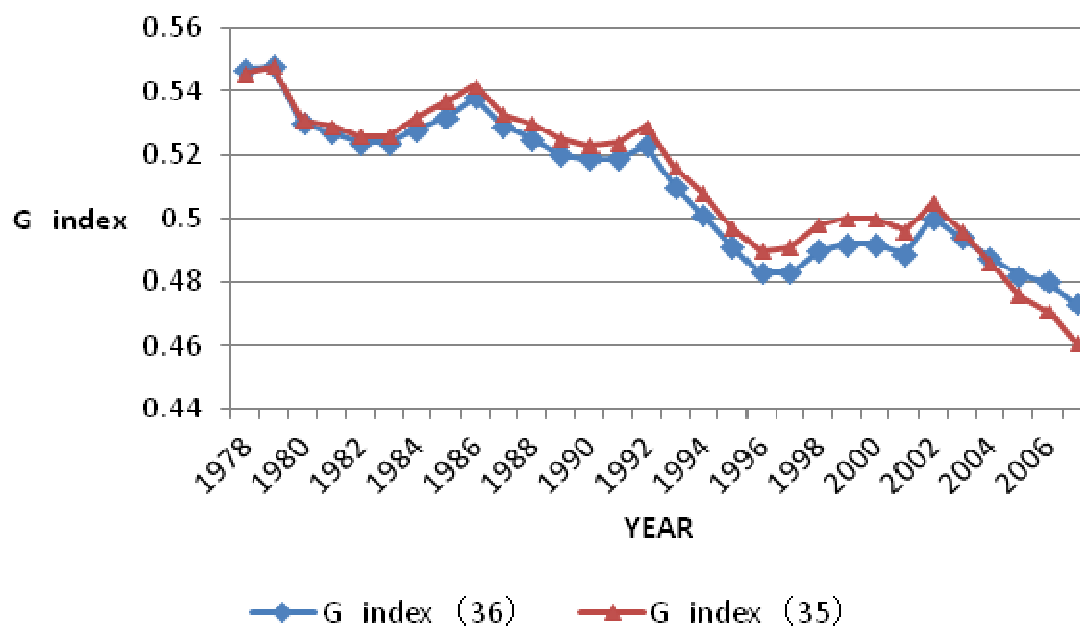


Figure 7. G index of the foreign trade gap

were declining, but the interior gap was increasing and exterior gap was declining recently.

The risk of foreign trade gap with G index

In Figure 7, G index of foreign trade gap was declining on the whole, G index fell from 0.547 to 0.473 during 1978-

2007. This demonstrates that the risk of foreign trade gap was declining, and this conclusion was consistent with the preamble analysis which said that the relative gap was declining.

Before 1980, the curve including China and the curve without China were almost consistent, and this was because China just started carry out reform and open policy then. During 1981-2003, the curve without China

Table 1. the Q index of foreign trade development of countries in the lead during 1978-2007

Serial number	Country	1978	Country	1987	Country	1997	Country	2007
1	Singapore	11.24	Singapore	10.67	Singapore	7.35	Singapore	7.54
2	Hong Kong	5.11	Hong Kong	7.16	Hong Kong	6.23	Hong Kong	7.35
3	Ireland	3.42	Belgium	3.86	Malaysia	4.31	Belgium	3.92
4	Belgium	3.40	Luxembourg	3.86	Belgium	3.60	Malaysia	3.80
5	Luxembourg	3.40	Malaysia	3.50	Luxembourg	3.60	The Czech Republic	2.88
6	Taiwan	3.31	Ireland	3.25	Ireland	3.07	The Dutch	2.86
7	The Dutch	3.11	Taiwan	3.10	The Dutch	2.82	Taiwan	2.59
8	Malaysia	3.09	The Dutch	2.91	The Czech Republic	2.47	Thailand	2.51
9	South Korea	2.06	South Korea	2.27	Thailand	2.18	Luxembourg	2.18
10	The Czech Republic	2.06			Taiwan	2.17		
11	Switzerland	1.96						
Mean value		1.95		2.07		1.90		1.84
	China	0.374		0.903		0.906		1.384

was above the curve including China, and this demonstrates that China took an active part in international division of labor and strove to develop foreign trade, which helped to reduce the risk of foreign trade gap. But, after 2002, the foreign trade developed rapidly which increased the risk of foreign trade gap. In the Figure 7, the curve without China was lower than the curve including China since 2003, and the gap between two curves were ascending.

The level of foreign trade development with Q index

We estimate the Q index of 36 countries during 30 years. According to the results, the countries with high level of foreign trade were stable during 1978-2007. In most years, there were 9 countries which were in the first place, but there were 10 or 11 countries in the lead in several years. On the whole, the order and Q index of these countries were relatively stable. In Table 1, we can find that: (1) Firstly, Singapore and Hong Kong were always the top 2, because their economic systems were highly open and international. Malaysia, Taiwan, Thailand, Belgium, Ireland, the Netherlands, and the Czech Republic had developed foreign trade, but their order may change with economic fluctuation. (2) Secondly, Q index was decreasing on the whole. For example, Singapore's Q index continued to fall during the past 30 years, Q index of Singapore is 11.24 in 1978 and decrease to 7.54 in 2007. Q index of other countries followed the similar trend. In the sight of balance, effect of different countries' foreign trade on boosting economy was balanced, which is helpful to the coordinated development of world economy.

The foreign trade level of China continued to ascend. In 1978, Q index was only 0.37, but it was 1.38 in 2007, which was almost four times as large as Q index in 1978. Compared with the world's average foreign trade development, the development of China's foreign trade was below the world's average level, but the gap was reducing. We take seven countries into consideration: The United States, Japan and Germany, Russia, Brazil, India and China. In Figure 8, the foreign trade level of seven countries including China was below the world's average level during 1978-1992. In the seven countries, German's foreign trade development was the highest. China continued to increase converging towards German. Russia had a large range of variations. The foreign trade development of the United States, Japan, India and Brazil was low caused by different reasons.

Conclusions

This paper researches on the foreign trade gap in 36 countries and China's effect on the gap. We find that:

(1) On the whole, the absolute gap of foreign trade in countries was increasing, and China contributed to increase the foreign trade gap since 2002. The relative gap of foreign trade decrease in ripples and foreign trade development of China helped to reduce the foreign trade gap since 1984. China's effect on the foreign trade gap was increasing and reached highest in 2001, but its effect started to reduce after that. (2) From the view of foreign trade gap of America, Europe and Asia, the foreign trade gap of the three continents were declining, and the gap was mainly caused by interior gap. The exterior gap was relatively little. Interior gap accounted for about 90%

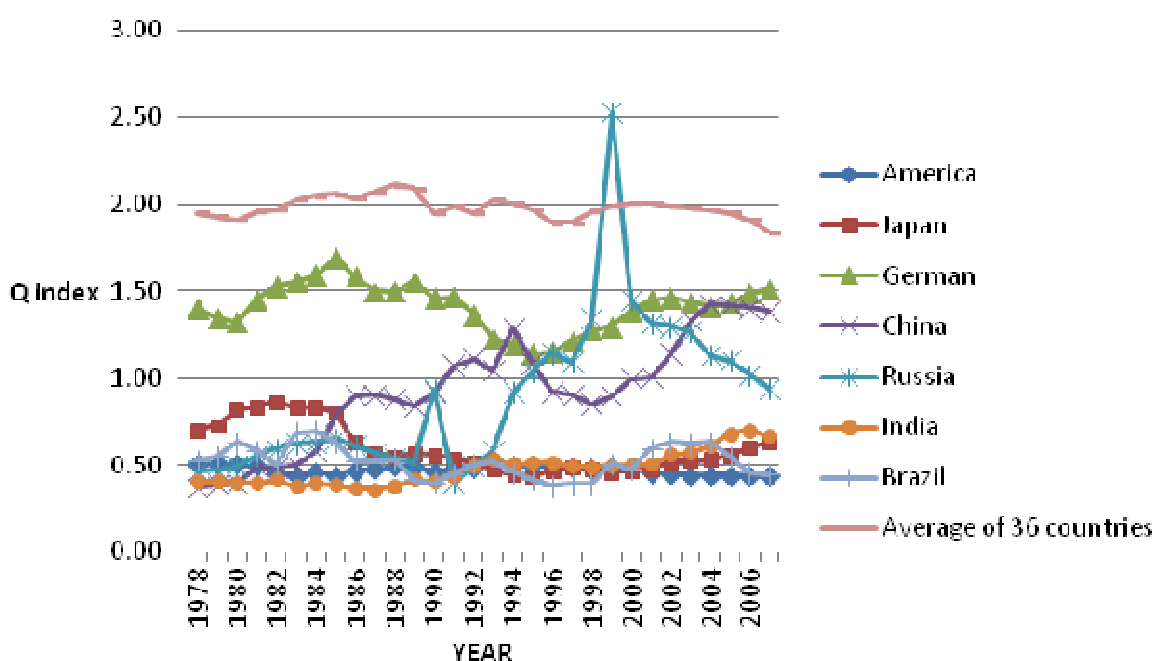


Figure 8. Q index of some countries and average of 36 countries during 1978-2007

proportion, and exterior gap accounted for about 10% proportion. From the view of interior gap, American interior gap was greatest, European interior gap came next and Asian interior gap was smallest. According to the research results, China contributed to reduce Asian interior gap before 2001, but China contributed to increase interior gap after 2001.

(3) From the view of foreign trade gap of developed countries and developing countries, the gap of two groups was decreasing, and the gap was mainly caused by the interior gap. Interior gap of developed countries was always greater than that of developing countries.

China contributed to reduce the foreign trade gap of developing countries before 1991, but China contributed to increase the foreign trade gap after 1991.

(4) The risk of foreign trade gap was reducing. G index fell from 0.547 to 0.473 during 1978-2007. During 1981-2003, the development of China's foreign trade helped to reduce the risk of foreign trade gap. Since 2004, the development of China's foreign trade contributed to increase the risk of foreign trade gap.

(5) The countries whose foreign trade development takes the lead were stable. Development of China's foreign trade was increasing. Q index increased from 0.37 to 1.38 during 1978-2007. Compared with the average level of world's foreign trade development, development of China's foreign trade was lower than that of world's foreign trade. But China's development was converging with world's average development and German's foreign trade development.

In recent 30 years, the foreign trade gap in countries

was reducing on the whole with globalization of world economy. This result proved that economy globalization was in favor of reducing foreign trade gap. But we also found that reducing foreign trade interior gap was vital to reducing world's foreign trade gap. In the context of economic globalization, a country should carry out reform and open policy, strive to develop foreign trade, participate in international division of labor, and all these actions are in favor of economic development and reducing the gap with other countries. What's more, in order to reduce foreign trade interior gap in a region, regional economic integration should be further improved.

According to the analysis of China's effect on regional foreign trade gap in the world, we reach a conclusion that China's effect on reducing foreign trade gap changed from positive to negative since 2004. This was caused by rapid development of China's foreign trade since China participated in WTO. This result was also consistent with environment depravation of China's foreign trade, increasing trade frictions, increasing risks of foreign trade. In order to alleviate challenges of China's foreign trade, China should speed up the industrial structure promotion, optimize the foreign trade structure, improve the quality of using foreign investment, strengthen economic and trade exchanges with surrounding regions, and change the model of China's foreign trade growth.

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