Global Journal of Management and Business Research: E Marketing
Volume 15 Issue 5 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Research on the Fragility of the Production Network in East Asian Region and the Industrial Development Strategies of our Country

By Cheng Xinxuan

The School of Management of Hebei University, China

Abstract- With the changing of international division pattern, the economy in East Asian Region has broken through the traditional "mode of wild goose travel" and formed a new type of East Asian production network, which has become an important part of the global production network. China, as the core of the production network in East Asia, has increased in trade in the region year after year. It is mainly embodied in importing a great deal of parts and components from the region and exporting finished products to such countries as USA, in EU, etc. outside the region after processing. China has been playing a part of intermediate hub in the "triangular trade" inside and outside East Asian Region. Although such typical trade characteristic improved the competitive power of the member countries in the production network of East Asian Region in a certain period of time, the impact of the American financial crisis on East Asian Region showed that the production network in East Asian Region was fragile to a certain degree.

Keywords: fragility, preferential rules of origin, production network in east asia, "triangular trade".

GJMBR - E Classification : JEL Code : L16

Research on the Fragility of the Production Network in East Asian Region and the Industrial Development Strategies of our Country[1]

Cheng Xinxuan

Abstract- With the changing of international division pattern, the economy in East Asian Region has broken through the traditional "mode of wild goose travel" and formed a new type of East Asian production network, which has become an important part of the global production network. China, as the core of the production network in East Asia, has increased in trade in the region year after year. It is mainly embodied in importing a great deal of parts and components from the region and exporting finished products to such countries as USA, in EU, etc. outside the region after processing. China has been playing a part of intermediate hub in the "triangular trade" inside and outside East Asian Region. Although such typical trade characteristic improved the competitive power of the member countries in the production network of East Asian Region in a certain period of time, the impact of the American financial crisis on East Asian Region showed that the production network in East Asian Region was fragile to a certain degree. In recent years, more and more member countries have joined in the production network in East Asia with more and more industries covered. What changes has the fragility experienced? This essay makes a quite deep exploration from such aspects as the trade structure within the region, the production characteristics and the changes in the trade relations among China, Japan and Korea resulting from the political conflict between China and Japan and proves that the fragility of the production network in East Asia has been further increased. And it takes the American financial crisis as an example to analyze the mechanism of fragility transmission from industrial and financial levels. The author further studies the industrial distribution characteristics of China in the production network of East Asia, reflects a trade structure of "both ends being outside", which restricts seriously the industrial self growth ability of our country. Therefore, under the environment confronting returning of American manufacturing industry and initiation of trans-Pacific partnership (TPP) agreement, it is necessary to present the industrial development strategies of our country from both regional and national levels.

Keywords: fragility, preferential rules of origin, production network in east asia, "triangular trade".

Author: professor, the School of Management of Hebei University. e-mail: cheng_xinxuan@126.com

I. Introduction

Since 1990's in the 20th century, the international division pattern has had an in-depth change with the development of economic globalization. An evolution from the initial change among industries to the change within industries and finally to the change within products has been finished. Such a division production mode within products makes the production process for the same final product be divided into a number of links, which are dispersed in the countries or regions with the highest efficiency and lowest cost for production according to the comparative advantages of different countries. Such a new type of international production mode combines organically the participants and dominant players at different levels on the current international economic stage to form a global "international production network (IPN)". In recent ten plus years, such a global production division has created a new labor division mode among the economic bodies in East Asia, especially in Southeast Asia. The rapid development of the production network has changed the production mode and international trade mode of East Asia, with trade within the region having been expanded through transactions in parts and components across borders. According to the Asian input-output table of Japan External Trade Organization (JETRO), we can see that the international production fragmentation of Asia has developed and evolved from simple south-north oversea processing trade to a horizontally and vertically staggered regional production network, which is called "Asian Plant". [2]

Since entering into the 21st century, the free trade zone in East Asian Region has achieved a rapid development. As of Apr. 11, 2013, the number of RTAs that the countries in East Asia had communicated to WTO and executed had reached 45, accounting for 21%

[2] Baldwin,R.E(2008).Managing the Noodle Bowl: The Fragility of East Asian Regionalism, Singapore Economic Review, vol.53,No.3;pp.449-478.

[1] This essay is a stage result of the key project of national social science planning fund for 2014 as "Study on Influence of Rules of Origin of East Asian Free Trade Zone on the Industrial Position of our Country in the Region" (Project No.: 14AGJ013); a stage result of the supporting plan of the Education Ministry for excellent talents in the new century for 2012. a stage result of the supporting plan of the Educational Bureau of Hebei Province for high level talents: Study on Influence of Rules of Origin of East Asian Free Trade Zone on the Industrial Value-added of our Country in the Region" (Project No.: Gcc2014055)

of the total number of FTAs/RTAs reported by the members to WTO. [3] With the rapid development of regional economic cooperation in East Asian Region, the unilateral custom duty level of different countries is reducing increasingly and the degree of division within the region has become finer. The degree of economic reliance among different countries is constantly increasing, and the division mode within East Asian Region is being adjusted constantly. The Asian Manufacturing Matrix has become more complicated. [4] Just as pointed out by Fukunari Kimura (2010), the development of the free trade zone in East Asia has promoted liberalization of trade and investment and further promoted the development of the regional production network. Such developed economic bodies with sufficient technologies and capitals as Japan, Korea, etc. have begun to engage in upstream production procedures for capital and technology intensive products and export such intermediate input products as parts and components, etc. to such developing economic bodies which are cheap in labor, abundant in natural resources and sufficient in land elements as China, Indonesia, etc. who complete labor intensive downstream production procedures. [5] East Asian Region has begun to exhibit such characteristics as being open, being dynamic, multiple routes and multiple speeds, etc., which make the degree of professional division among different countries in the region become constantly deepened with "production network fragmentation" having formed in East Asia, [6] and the intermediate product trade centralization within the region increasing. Therefore, the development of Asian international production network in the past 20 years is a dynamic result of trans-national companies adapting to changes in the trade and business environment, with the original "mode of wild goose travel" being broken through and a typical "triangular trade" characteristic exhibiting. Such a trade structure resulted in a great impact on the production network in East Asian Region during the American financial crisis in 2007, highlighting the fragility of the production network in East Asian Region. [7] The world trade volume of East Asia during the 14-month period from Apr. 2008 to Jun. 2009 fell by 20%. The whole area of East Asia fell by 32.5% during the same period. The import volume also fell by 33.1%, exceeding the world trade decrease level.[8]

With China being taken as a media, the decrease in import of final manufactured goods from China by USA rapidly resulted in decrease in export by other countries in East Asia. The American financial crisis generated a great impact effect on East Asian Region and this effect was closely related to the production network in East Asian Region (Arthkoralan and Kohpaiboon, 2010). [9] In recent years, the American economy has gradually recovered and the export by the member countries in East Asia has also resumed to a trend as strong as that in the past. However, the fragility of the regional production network is being enhanced. The degree of industrial participation in the region by our country is increasing, but the position is still locked at the industrial low end. Therefore, it is urgent to take some measures to increase regional self growth and upgrade the intrinsic competence of the industrial development of our country.

II. Judgment on Enhancement of Fragility of Production Network in East Asian Region

Fragility is a kind of instability and a representation of high external reliance and lack of self growth ability. Professor Chen Jianan raised instability of regional division system through analyzing the unbalance of the trade structure of East Asia; [10] Ikuo Kurowa analyzed the fragility of the production network in East Asian Region through impact of the American financial crisis on it. [11] The fragility of the production network in East Asian Region is a kind of intrinsic characteristic with the changing direction having to be analyzed from the regional trade structure and production characteristics, etc.

[3] Wto.org.cn

[4] Fukunari Kimura, FTA Networking in East Asia and Asia-Pacific: Where are we going? Economic Research Institute for ASEAN and East Asia, 2010,November.

[5] Ikuo Kurowa, Hiroshi Kuwamori, Impact of the US Economic Crisis on East Asian Economies:Production Networks and Triangular Trade through Chinese Mainland, China&World Economy/1-18,Vol.19,No.6,2011，p7.

[6] The production network in East Asia mainly includes the following parts: in Southeast Asia, including Singapore, Philippines, Malaysia and Thailand, who mainly import mechanical parts and components; in Northeast Asia, including Japan, China and Korea. At present, Indonesia, Vietnam, Burma, Cambodia, Laos, etc. are gradually participating in the production network in East Asian Region.

[6] Fragmentation: Initially by Jones and Kierzkowski (1990). The parts and components of one product are allocated in different regions or countries for production. Later, Cheng and Kierkowsk 2001, IDE, 2005, studied this issue relevantly, which basically contains "localization, division, internationalization, multi-stage production, outsourcing, perpendicular specialization, etc.".

[7] Ikuo Kurowa, Hiroshi Kuwamori, Impact of the US Economic Crisis on East Asian Economies:Production Networks and Triangular Trade through Chinese Mainland, China&World Economy/1-18,Vol.19,No.6,2011，p7.

[8] Wang Rongyan, Study on Mechanism and Effect of the Production Network in East Asia being Subject to Impact----Analysis Based on the Trade Structures of East Asia and China, Academic Library of Tianjin, Book 2, Page 1292.

[9] Arthkoralan and Kohpaiboon,2010，China and East Asian trade: the decoupling fallacy,crisis and policy challenges, in Ross Garnaut,Jane Golley and Ligang Song,eds, China:The Next Twenty Years of Reform and Development,Canberra: Australia National Univerisity E-Press,pp.193-220.

[10] Chen Jianan, Industrial Division System of East Asia and its Structural Unbalance, Study on World Economy, Issue 4, 2008, pages 72-79.

[11] Ikuo Kurowa, Hiroshi Kuwamori, Impact of the US Economic Crisis on East Asian Economies: Production Networks and Triangular Trade through Chinese Mainland. China&World Economy/1-18.vol.19,No.6,2011

a) The enhancement of "triangular trade" structure increasing reliance on European and American countries

"Triangular trade" structure means that a country or region imports parts and components for processing and assembly and then exports the final products to other countries or regions. Kim, Won Bae (2011) pointed out that a mode of reliance with each other by taking China as the center had been formed in East Asia. In recent years, the trade surplus of China with Europe and America has increased rapidly. At the same time, the import by China from other countries in East Asia[12] has increased substantially. In electronic, mechanical aspects, China has created a great trade deficit with Japan, Korea, China Taiwan and Malaysia. This forms in East Asia an important processing and assembly export platform as China, who imports from Japan, Korea intermediate products with a high capital, technology intensive degree, imports from such ASEAN countries as Malaysia, etc. intermediate parts and components with a low capital, technology intensive degree and finally have them assembled in China and exports the final manufactured goods to such developed countries as in Europe and America, etc. to Japan, Korea, ASEAN with USA, that is, the final products in East Asian Region are imported to other countries outside the region through China. This indicates that the "triangular trade" structure of the production network of East Asia is more apparent, which is further enhanced.

The enhancement of the "triangular trade" structure has on one hand strengthened the economic ties among the member countries with the degree of mutual reliance being increased. On the other hand, there is a more reliance on the demands of countries outside the region for the final products. As a result, the production status and profit-making degree of the production network in East Asian Region is dependent to a large degree on the status of demand for the final manufactured goods. Therefore, though this mode has promoted the economic growth in the member countries of East Asia and increased the competitive power of the East Asian economic bodies, the reliance of final manufactured goods on countries outside the region increases the fragility of the regional production network. If the demand of USA or EU for final manufactured goods decreases due to economic crisis or other economic impacts, it is hard for the products produced by the production network in the East Asian Region to find markets and the product values can not be realized. As a result, the export industry of China will suffer an impact with relevant industries in East Asia to be affected. The economic development will face greater risks.

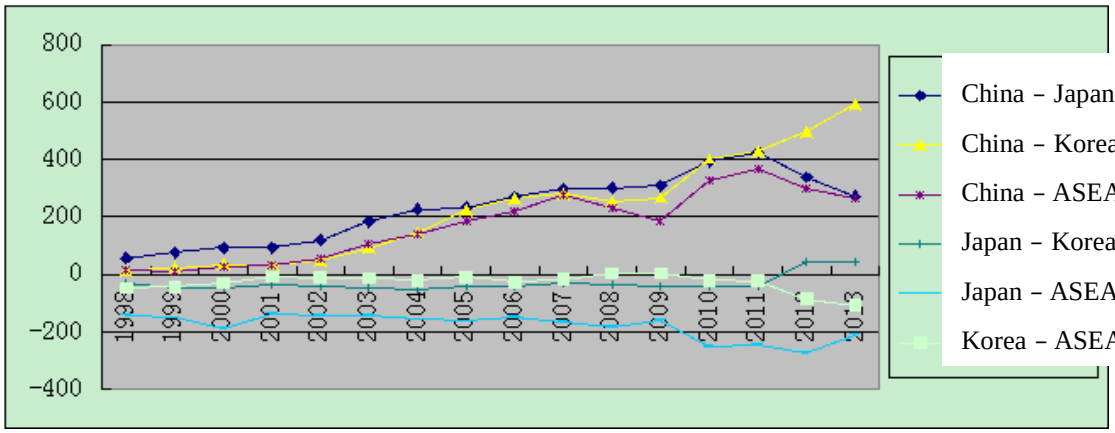

Figure 1 : Trade deficit in parts and components between main countries and regions in East Asia (Unit: x108 USD)

Data source: Calculating, plotting according UNCOMTRADE data

[12] Kim,Won Bae, the Rise of China and Repositioning of Asian NAEs, Seoul Journal of Economics; Summer 2011;24,2;ProQuest

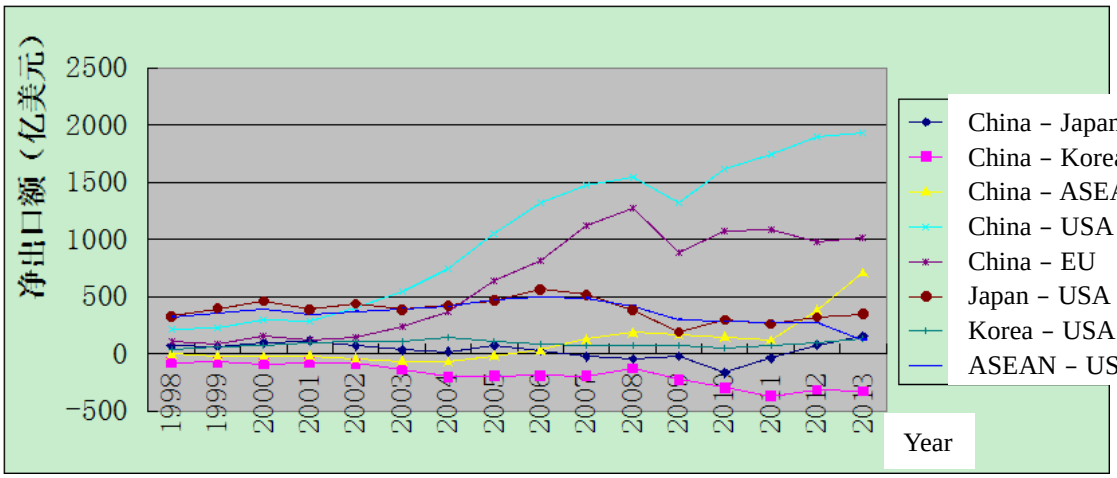

Figure 2 : Net final product export between main countries in the world (Unit: x108 USD)

Information source: Calculating, plotting according UNCOMTRADE data

Note: Here EU refers to such 15 countries as France, Italy, Holland, Belgium, Luxembourg, Germany, Ireland, Denmark, UK, Greece, Portugal, Spain, Austria, Finland, Swede.

b) The synchronization of economic cycle in the member countries in the production network of East Asian Region increases the synergistic effect of external impact in East Asia

Trade association will become a blasting fuse for crisis transmission, especially for trade within industries (perpendicular specialization), which may enhance the links among the member countries and increases the synchronization of economic cycle through such modes as production division or outsourcing, etc. [13] As the division of the production network in East Asia is high in perpendicular specialization degree, the density of added value trade increases with it, so does the synchronization of economic period among the member countries will also increase. [14] Such scholars as Backus and Burstein, etc. made a theoretical exploration about how exogenous demands influence the import and export of part and component production and assembly countries from country level respectively. Their conclusions show that among partner countries with a high degree of perpendicular specialization, changes in the final commodity demand are easier to cause changes in production and trade of these countries in the same direction, that is, the impact brought by an economic crisis is easier for a synergistic effect to form in these countries. [15] This kind of synergistic effect increases the synchronization of economic period in member countries.

The shortening of time point for interconnection of the production links among member countries increases the synchronization of economic period in member countries. With the increase of globalization degree in East Asian Region, the obstruction to commodity flow among member countries is reducing gradually. As a result, a deepened development of production network is promoted. With an improvement being made with a great effort in basic transportation equipment by all economic bodies, an in-time production system has been formed. The establishment of in-time production system is related to logistic performance index. The higher the logistic performance index of a country is, the higher the degree of participation in regional production network will be and the in-time production system efficiency will be. The World Bank calculated the ranking of some countries in logistic performance index for 2010, in which China was No. 27, India was No. 47, Indonesia was 75 and Thailand was No. 35. In 2012, China was No. 26, India No. 46, Indonesia No. 75 and Thailand No. 38. [16] And it is showed through investigation that India has adopted e-purchase to reduce negotiation costs. Indonesia has also further emphasized the importance of transportation infrastructures and is further improving. [17] Besides, the perpendicular mode of production division is very sensitive to production workshop configuration location and assembly line arrangement. Therefore, in terms of the dynamic development viewpoint of the

[13] Brooks,Douglas H;Hua, Changchun, Asian Trade and Global Linkages, Asian Development Review 26.1,2009

[14] World Economic and Financial Surveys, Regional Economic Outlook—Asia and Pacific Sustaining the Momentum: Vigilance and Reforms, Apr.2014.p47.

15 Burstein, A., C. Kurz, and L.Tesar.2008. Trade, Production Sharing, and the International Transmission of Business Cycles. NBER Workig Paper No.13731,National Bureau of Economic Research, Cambridge, MA

[16] World Bank Report, Connecting to Compete----Trade Logistics in the Global Economy.2012,p6.

[17] Mochamad Pasha, Linkages between regional trade agreements and international production networks: evidence from five case studies in Asia,p59

production network in East Asia, more and more countries have participated in the production network of East Asian region. The distance between intermediate product production workshops is becoming nearer and nearer and division is becoming finer and finer and the degree of specialization is becoming higher and higher. Take part 7522 as an example, as early as in 1992, the production network mainly related to Japan, Malaysia, Singapore and Thailand. The degree of participation by China, China Hongkong, Philippines and Korea was very small. Indonesia almost participated in no division. In 1997, with Indonesia participating in, the production network had related to 9 economic bodies; in 2007, China, China Hongkong, Japan, Indonesia, Thailand, Malaysia, Philippines, Korea, Singapore all participated in the production network, in which China, China Hongkong, Japan, Malaysia and Singapore have become the main nodes in the production network. [18] Though the finer the degree of specialized division is, the higher the production efficiency will be, the more member countries the in-time production system relates to, the higher the synchronization of production in member countries will be. Once an external impact is confronted, the whole production system will confront a risk of paralysis and the fragility is more apparent. In Nov. and Dec., 2008, due to American financial crisis, the export of China to USA fell by 5% and the import from the developing Asia fell by 25%. In the first season of 2009, the export of China to USA and EU fell by 15.4% and 22.6% respectively, and the import and export to East Asia also began to fall substantially in general in the same period. The export of Japan fell by 42.1%, that of Korea fell by 24.5%, that of ASEAN fell by 36.8%, that of India fell by 19.8% and that of China Taiwan fell by 35.9%.[19] Obviously, once any impact is confronted, the production system in East Asia will have a chain reaction.

c) The disperse degree of the production network in East Asian Region reduces the ability of the production chain to resist impacts

The formation of the production network in East Asia is based on production process dispersion, that is, producers separate production processes of different sections for one product and organize its production according to the elements and natural endowments of different countries and regions. Previously, some scholar used "fragmentation" to represent the characteristic of the production network in East Asian Region. According to the present development situation, it is more accurate to use dispersion. The higher the disperse degree of a production chain is, that is, the production of a part or the processing of a work procedure by a single country results in production simplification, the lower the ability to resist external impacts will be.

After the American financial crisis, the disperse degree of the production network in East Asian Region further increased, which can be represented through the proportion of intermediate products. From late 20th century, part and component trade began to form a main part in the trade structure of East Asian Region. The volume of the part and component trade in East Asian Region increased from USD 25.4 billon in 1998 year after year. In 2010, the part and component trade volume reached USD 2597.7 billion, accounting for 35% of total goods trade in East Asian Region. In comparison with part and component trade, the final consumer goods trade volume in East Asia Region accounts for ten plus percent of the total goods trade in East Asian Region from 1998 to 2010 continuously, except 26% in 2003. The part and component trade growth rate in East Asian Region is much faster than the final consumer goods trade volume growth rate. The production network in East Asian Region exhibits a phenomenon of apparent dispersion.

The preferential rules of origin in East Asian Region aggravate the dispersion of the production network. As of Apr. 2013, the number of free trade zones as communicated by the East Asian Region to WTO was 45. The preferential rules of origin for different free trade zones contain about 100-300 pages, which are mainly concentrated in the manufacture industry. The preferential rules of origin for free trade zones formed among the member countries within East Asian Region mainly take the preferential rules of origin of the free trade zones in China—ASEAN as the template: that is, custom duty tariff change is taken as the foundation, the regional value content standard is around 40%. Except ASEAN—China, ASEAN—Korea adopt a diagonal cumulation mode, other free trade zones adopt bilateral cumulation. In order to enjoy a regional preferential treatment, products from one country have to meet the regional rules of origin. Producers can only purchase intermediate inputs with a high cost from the member countries in the region and then process, produce them into final products for export to other member countries. Take tractor production as an example, if an enterprise in Malaysia uses parts and components from other countries to produce tractors and then exports to Japan and China for selling, the value-added content (VC) has to reach 40% according to the regulations of the preferential rules of origin of Japan—Malaysia, Japan—

[18] Zhang Baiwei, Hu Xuewen, Dynamic Evolution of the Production Network in East Asian Region----Analysis Based on Part and Component Trade Industrial Chain, Study on World Economy, Issue 3, 2011, page 85.

[19] Wang Rongyan, Study on Impact-suffering Mechanism and Effect of the Production Network in East Asia----Analysis Based on the Trade Structures of East Asia and China, Academic Library of Tianjin, Book 2, page 1293.

ASEAN. In the rules of origin of China—ASEAN, the VC is also 40%. Thus, in order to enjoy a regional preferential treatment, the Malaysian enterprise uses more parts and components from China for exporting tractors to China and the tractors exported to Japan tend to use more parts and components from Japan or ASEAN. Besides, the cumulation rules adopted by the free trade zones in East Asia Region also allow the member countries to go to wilder fields to purchase raw materials and intermediate inputs, which further promote production location configuration diversification in East Asia. Stevadeordal and Suominen (2005) summarized that the rules of origin being applied to regional production chain to make the rules of origin and regional production division combine closely becomes an important reason of division "fragmentation" in East Asia. [20] In the preferential rules of origin for different free trade zone in East Asia, the influence of regional value content standard and cumulation rules on the regional production division system is more apparent than such regulations as custom duty tariff change, etc. Ikuo Kuroiwa adopted a direct measurement calculation method to conclude from analysis that the content standard and cumulation rules in departments of manufacturing industry make the intermediate inputs from China and Korea increase substantially, and the inputs from Japan increase in a very small magnitude. The higher the degree of dispersion the regional production network is and such member countries as China and Japan, Korea, etc. have a poor ability to become a final product absorber, when the economic bodies in the bottom of regional division confront an impact again, it is easy to cause a great deal of final products to overstock, export to reduce greatly, departments with export income to reduce greatly, and then import from other economic bodies is reduced that results in final paralysis of the whole production chain.

Table 1: Situation of part and component trade, final consumer goods trade and commodity

Year	Parts and components in East Asia Total trade ($x10^8$ USD)	Final consumer goods trade volume in East Asia, $x10^8$ USD	Total commodity trade in East Asia, $x10^8$ USD	Proportion of part and component trade	Proportion of final consumer goods trade
1998	254	2860	18435	1. 40%	16%
1999	2456. 72	3956	20121	12%	20%
2000	3459. 96	4452	24784	14%	18%
2001	3935. 4	4352	22731	17%	19%
2002	5265. 52	4722	24450	22%	19%
2003	7490. 44	5441	20920	36%	26%
2004	10370. 52	6362	36880	28%	17%
2005	12939. 88	7131	43370	30%	16%
2006	16424. 4	8121	68895	24%	12%
2007	19677. 8	8949	58824	33%	15%
2008	21771. 52	10205	68932	31%	15%
2009	19398. 76	8812	55640	35%	16%
2010	25976. 76	11160	73290	35%	15%

The low degree of mutual demand for final products among the member countries in the production network of East Asian Region weakens regional self growth.

In relation to the perpendicular intra-industry trade, the horizontal intra-industry trade (HITT) is based on mutual demands between different economic bodies. Especially, the demand for similar differential products forms a division pattern focusing on final product trade. From Table 1, we can see that the proportion of the final consumer goods trade in East Asia was around ten plus percent during the period from 1998 to 2010, except 23% in 2003. In 2010, it was 15%, which was even lower than 1998. From trade structure figure 3, we can see that the net final product export amount between China and Korea in 2011 was 369.59bd, which was 37.19bd and 86.51bd between China and Japan and between China and ASEAN respectively. This sufficiently explains that the ability to endure external impact is weak due to a low degree of mutual demand for final products and being hard to form a self circulation system from intermediate product production to final products in the region, and there is an exhibition that the division and trade system in the region is lack of stability. Therefore, when the global production and consumption structure faces an adjustment, the developing economic bodies located in the bottom end of the division system in the perpendicular industry will be bound to bear more economic and social costs. Besides, the low demand for intercrossing between economic bodies is unable to form a self circulation system for production and consumption in the region and this is unfavorable to

[20] Antoni Estevadeordal ,Kati Suominen. Rules of Origin in Preferential Trading Arrangements.
Is All Well with the Spaghetti Bowl in the Americas? Economía 5.2 (2005) 63-103.

intermediate product production enterprises realizing scale economy, increasing the international competitive power. Therefore, this characteristic weakens regional self growth and results in regional fragility.

d) The political conflict between China and Japan will result in readjustment to the industrial self circulation system in East Asian Region

China, Japan and Korea are three major economic bodies in East Asia. If the three countries establish a free trade zone, it will be the third major free trade zone after the free trade zones in EU, North America. This will be bound to bring a great drive force to the general economic growth in East Asian Region. However, due to such events as "island purchasing" by Japan, Abe's visit to Yasukuni Shrine, etc., the political conflict between China and Japan has escalated, which has caused a detriment to the political trust with each other. This has not only restricted the negotiation progress on free trade zone among China, Japan and Korea, but the original normal trade has also been affected to different degrees. According to the statistics of Japanese Customs, from Jan. to Nov. in 2013, the bilateral trade goods import and export amount between Japan and China was USD 282.64 billion, down by 7.9%. In which, the export of Japan to China was USD 117.37 billion, down by 12.0% and accounting for 17.9% of the total export amount, down by 0.2 percent; the import of Japan from China was USD 165.27 billion, down by 4.8% and accounting for 21.7% of the total import amount. The trade deficit between Japan and China grew by UDS 47.90 billion, up by 18.9%. The commodities in the first six places exported by Japan to China were: electric machine (85), mechanical engineering (84), organic chemicals (29), optical equipment (90), automobiles and accessories (87), plastics and plastic products (39). Correspondingly, the bilateral good import and export amount between Korea and China during the period from Jan. to Nov. 2013 was USD 208.82 billion, up by 6.2%. In which, the export of Korea to China was USD 132.86 billion, up by 8.6% and accounting for 26.0% of the total export amount, up by 1.7 percent; the import of Korea from China was USD 75.95 billion, up by 2.1% and accounting for 16.1% of the total import amount, up by 0.5 percent. The trade surplus between Korea and China was USD 56.91 billion, up by 18.6%. As of Nov., China was No. 1 trade partner of Korea. The commodities in the first six places exported by Korean to China were: electric machine (85), optical equipment (90), organic chemicals (29), mechanical engineering (84), mineral fuels (27), plastics and its products (39). Thus it can be seen that the import and export commodities between China and Japan and between China and Korea were almost the same. The negotiation between China and Korea on free trade has entered into the sixth round. It is very likely that China and Korea will establish a free trade zone first. If Japan continues to act arbitrarily, the relation between China and Japan will deteriorate and Korea will replace Japan to become a very important trade partner of China. And Japan will be isolated by the surrounding countries, in which not only the political situation will be unstable, but Japanese enterprises will also become something like water without source and the economy will suffer a heavy blow. As a result, the industrial self circulation system in East Asian Region will be subject to a readjustment.

III. The Transmission Mechanism Resulting from the Fragility of Production Network in East Asian Region – Take American Financial Crisis as an Example

Ikuo Kuroiwa, Hiroshi Kuwamori (2011) analyzed the transmission mechanism of the influence caused by the American crisis to the nine economic bodies in East Asia and mentioned that the economic crisis would have an impact through four channels on the regional production network. The first is the part and component production network, especially the electronic industry; the second is the industrial raw material network, especially chemical and metal industries; the third is the main commodity network, especially mineral products; the fourth is the service network, especially trade and transportation service. [21] Therefore, though the growth of part and component and final assembly trade in East Asia has exceeded the growth of world trade of the manufacturing industry, the reliance on world trade is still not reduced. The dynamic development of the regional network also relies on the demand for final products from the regional outside. This mode determines the fragility of the production network in East Asian Region.

[21] Ikuo Kuroiwa, Hiroshi Kuwamori, Impact of the US Economic Crisis on East Asian Economies: Production Networks and Triangular Trade through Chinese Mainland. China&World Economy/1-18.vol.19,No.6,2011

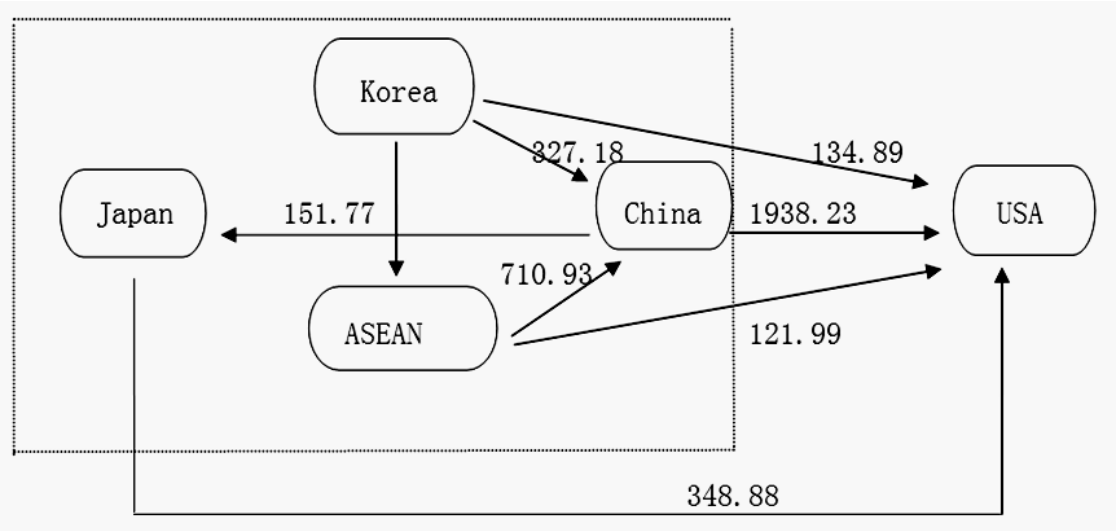

Figure 3 : Trade structure diagram for the production network in East Asian Region

Note: The arrow direction is the direction of net export; the black figures beside the arrows are final product export amounts; the red figures are intermediate product export amounts. The unit is billion dollars. Information source: calculating from the data from the database of United Nations Conference on Trade and Development (UNCTAD Database) (in 2013).

According to the trade structure diagram as described above, the influence of the American financial crisis on the production network in East Asian Region can be divided into three transmission ways.

a) Direct and unidirectional transmission

All the main participants in the production network of East Asia Region have a direct connection with USA. In terms of final manufactured goods trade, China is firstly a main platform for export of final manufactured goods to USA. After China, the platforms are ASEAN, Japan and Korea successively. When the demands in USA reduce due to any financial crisis, there will be an impact on these countries and regions. In the third quarter of 2008 and the first quarter of 2009, the total output of the 9 economic bodies in East Asia fell by US$128bn, in which the total output of China fell by US$68987m, that of Japan following immediately fell by US$28175m, that of Korea fell by US$7176m, which were mainly reflected in such industries as textile, leather, computer, electronic equipment, etc. (Ikuokurowa, p15). [22] From the above data, we can see that Japan suffered the greatest impact. This is because the main product exported to USA by Japan was cars being a kind of luxury product with a high demand elasticity, which was significantly influenced by the export reduction.

b) Overflow channels

A typical "triangular trade" structure has been formed in East Asia, in which China has become an important export processing platform, who imports a great deal of intermediate parts and components from Japan, Korea and ASEAN. As a result, a great deal of trade surplus has been formed between China and USA and a great deal of trade deficit has been formed with other countries in East Asia. The American financial crisis resulted in an impact on China and a reduction in the export of China, and then the import of China from such countries and regions in East Asia as Korea, Japan, etc. reduced as result, that is, an overflowing effect occurred. This kind of effect created a transmission through such intermediate parts and components as for transportation equipment, electronic, mechanical equipment, etc. resulting in an impact on the participants in the production network of East Asia. Korea, China Taiwan, Philippines, Malaysia, Thailand were influenced mainly in computer and electronic aspects through the overflowing effect, who suffered an obvious reduction. Singapore suffered an obvious reduction in terms of transportation. Indonesia's overflowing effect was obvious in terms of such raw materials as crude oil, natural gas, etc.

c) Direct investment relies on channels

For these later comer economic bodies, the introduction of FDI can solve the development fund problem and is similarly favorable to the optimization of their own industrial structures for merging into the production division system of the developed countries. Therefore, we can say that FDI expansion in East Asian

[22] Ikuo Kuroiwa, Hiroshi Kuwamori, Impact of the US Economic Crisis on East Asian Economies: Production Networks and Triangular Trade through Chinese Mainland. China&World Economy/1-18.vol.19,No.6,2011，p15.

Region has played an important role to promote the formation of the production network in East Asia. The developing countries in East Asia attracted foreign investment actively and the proportion of the amount of FDI introduction in the world is in a rising trend, which reduced only in 1997 under the influence of Asian economic crisis and in 2008 in the financial crisis. In 2010, the proportion of FDI attracted by the developing East Asia in the world reached nearly 30%, which increased by two times in comparison with 10.55% in 2000. Specifically speaking, the FDI attracted by the developing East Asia grew from USD 147.787 billion in 2000 to USD 423.157 billion in 2011. In which the FDI attracted by China grew from USD 40.715 billion in 2000 to USD 123.985 billion in 2011; the total FDI introduction by the ten countries in ASEAN grew from USD 22.696 billion in 2000 to USD 116.559 in 2011. [23]

The developed countries have created an important influence on the production network in East Asian Region through direct investment channels. On one hand, they have made up the fund insufficiency in the developing countries of East Asia; on the other hand, the transnational enterprises from the developed countries have controlled the key production links in the member countries in East Asia Region by way of investing to establish factories in East Asia, especially some R & D, highly capital and technology intensive production links. As a result, they have controlled the important national industries in some countries to a certain degree. Once these transnational enterprises withdraw capitals and return home, it will bring an impact on the economic development in the host countries and increase the potential fragility of industrial growth.

IV. Analysis to the Position of Chinese Industries in the Production Network of East Asia

China is in an important position in the production network of East Asia, which can be analyzed specifically according to the degree of participation and industrial characteristics.

a) Degree of participation in regional production network

The degree of participation in regional production network by a country can be reflected by intra-industrial trade index.

Grubel and Lioyd (1975) proposed an intra-industrial trade index calculation formula, which is $T=1-|X-M|/(X+M)$

Where: X and M represent respectively the import amount and export amount of a particular industry or a certain category of commodities and X-M are absolute values. The value range of T is from 0 to 1. By adopting the above calculating method, the intra-industrial trade indexes between China and the main member countries of East Asia are obtained (see Table 4). From 2002 to 2011, the intra-industrial trade indexes between China and other countries increased constantly (except Korea). It is thus clear that the degree of participation in regional industries by China has increased.

Table 4 : Intra-industrial trade indexes between main countries of East Asia for products of electric appliance class (SITC-77)

	China-Japan	China-Korea	China-Singapore	China- Thailand	Japan-Korea	Japan- Singapore
2002	0.44	0.44	0.89	0.51	0.7	0.39
2003	0.41	0.38	0.74	0.42	0.72	0.45
2004	0.45	0.38	0.79	0.44	0.7	0.44
2005	0.49	0.33	0.82	0.4	0.7	0.39
2006	0.5	0.36	0.92	0.38	0.78	0.45
2007	0.49	0.4	0.96	0.35	0.84	0.46
2008	0.54	0.45	0.88	0.41	0.84	0.47
2009	0.51	0.39	0.9	0.41	0.76	0.62
2010	0.53	0.37	0.96	0.45	0.8	0.49
2011	0.55	0.38	0.99	0.55	0.82	0.54
2012	0.61	0.34	0.98	0.75	0.78	0.53
2013	0.7	0.32	0.99	0.73	0.77	0.54

Information source: The author obtains the above data by calculating with the Grubel and Lioyd's intra_industrial trade calculating formula according to UNCOMTRADE data.

[23] Data source: UnctadStat-Statistical database, UNCTAD.org

Since participation in the production network of East Asia, China's foreign economy has achieved a rapid development and has developed into the 2nd largest trade country globally. At the same time, based on such factors as Chinese elements and natural endowments, etc., China has gradually become a rally point of intermediate products in the production network of East Asia and is in a core position in the production network of East Asia.

b) Industrial characteristics of China participating in the production network of East Asia

Table 5 : Trade constitution of manufacturing industry and total export trade amount of China

	Elementary products	Intermediate products		Final products		Final consumer goods
		Elementary products	Semi-products	Parts and components	Capital goods	
1998	3.82%	23.26%	9.81%	15.03%	47.90%	1838.09
1999	3.30%	22.33%	11.57%	15.90%	46.79%	1949.31
2000	3.67%	22.25%	12.83%	17.27%	43.76%	2492.03
2001	3.37%	21.71%	13.99%	18.39%	42.28%	2660.98
2002	2.93%	21.03%	15.62%	19.96%	40.24%	3255.96
2003	2.58%	20.49%	15.97%	23.26%	37.44%	4382.28
2004	1.89%	21.85%	16.65%	25.22%	34.18%	5933.26
2005	1.95%	21.94%	16.87%	26.41%	32.60%	7619.53
2006	1.42%	22.94%	17.43%	26.84%	31.09%	9689.36
2007	1.21%	23.74%	17.29%	27.93%	29.63%	12200.6
2008	1.29%	25.33%	17.42%	27.89%	27.91%	14306.93
2009	1.02%	21.17%	17.60%	29.93%	30.06%	12016.47
2010	0.90%	22.18%	18.27%	29.67%	28.81%	15777.64
2011	0.88%	23.73%	17.68%	29.13%	28.43%	18983.88
2012	0.79%	22.93%	17.67%	29.63%	28.87%	20487.82
2013	0.73%	23.08%	18.79%	28.02%	29.26%	22090.07

Date source: Calculating from UNCOMTRADE data

Note: In BEC classification, 111, 21, 31 are primary products, 121, 22, 32 are semi-products, 42, 53 are parts and components, 41, 521 are capital goods and 112, 122, 51, 522, 6 are final consumer goods.

Firstly, it is known from Table 5 that the proportion of Chinese final products in total export trade amount in 2011 was far higher than primary products. The proportion of the sum of capital goods and final consumer goods in export trade reaches nearly 60%, the proportion of capital goods grew from 15.03% in 1998 to 29.13% in 2011, which had increased nearly by one time. It is thus clear that from 1998 to 2011, the proportion of primary products in Chinese export trade structure reduced constantly and part and component trade increased substantially and the proportion of capital goods increased significantly. This indicates that the degree of participation in international production network by China is being deepened constantly and the capital intensity is also increasing constantly for export products. From Figure 4, we can see that the proportion of SITC-7 is the highest in export trade commodities.

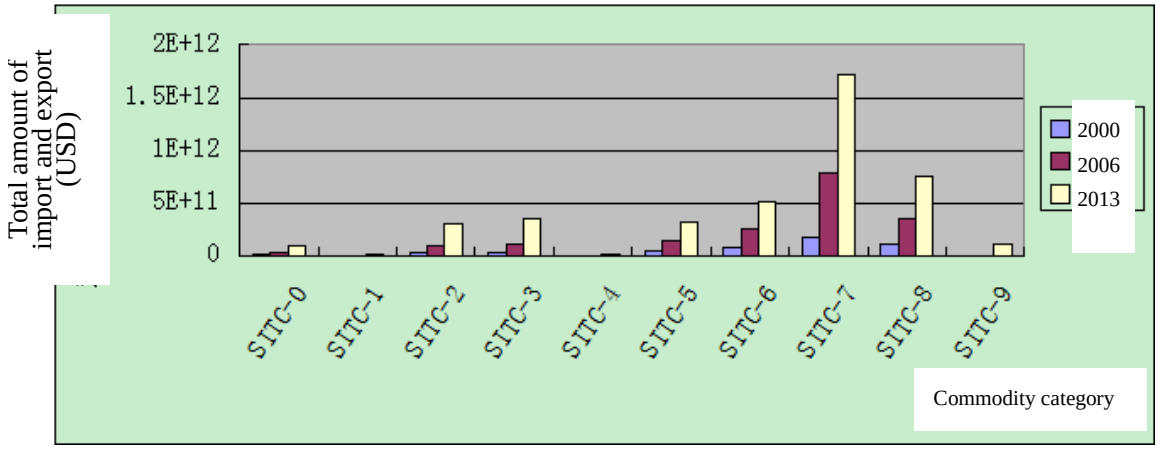

Figure 4 : Total foreign trade amount of ten major commodity categories of China

Note: (Rev.3) SITC-0 is food and live animals; SITC-1 are beverages and cigarettes; SITC-2 include furs, petroleum, seeds, oil-containing fruits, cork and wood, natural rubber, pulp, textile fibers, crude oil and fertilizers, metallic ores and metallic wastes;

SITC-3 is mineral fuels, lubricants and relevant materials; SITC-4 are animal and plant oils, greases and waxes; SITC-5 are chemicals and related products; SITC-6 is manufactured good classified to materials: leather, rubber products, cork and wood products, paper or paperboard, textile yarns and fabric manufactured goods, nonmetallic mineral products, non-ferrous metals and metal products; SITC-7 is mechanical and transportation equipment; SITC-8 is miscellaneous products: furniture and its parts, costumes and clothing accessories, shoes, tourist articles, etc.; SITC-9 is classified commodities and not transactions of other local trade standard classification

Data source: Calculating from UNCOMTRADE data

From the above figure, we can see that in the foreign trade of China, the total trade amount of the commodities of SITC-7 class is far higher than commodities of other classes. Therefore, this essay will mainly study the trade situation of goods subdivisions under SITC-7 class to judge the main industries of China participating in the production network of East Asia.

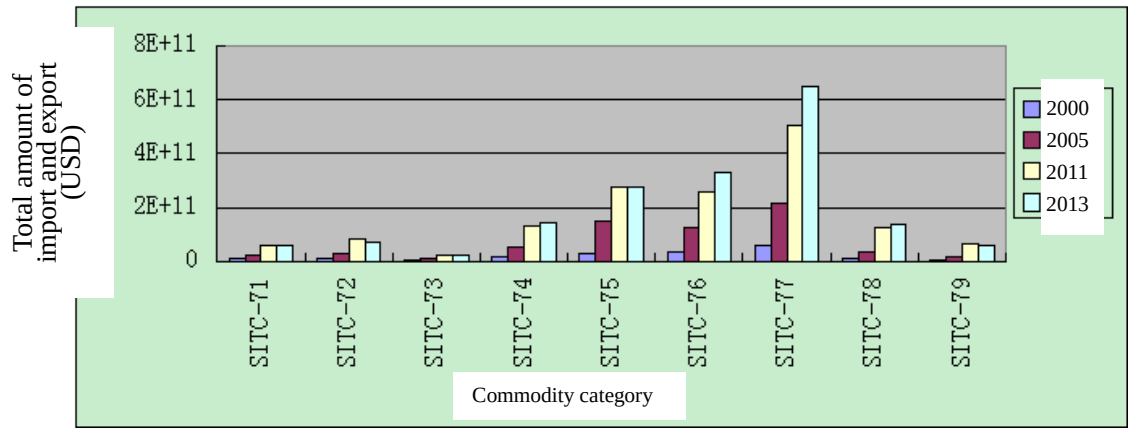

Figure 5 : Total world import and export trade amount of SITC-7 class commodities of China

Note: (Rev.3) SITC71 – power generation machineries; SITC72 – individual industrial special-purpose machineries; SITC73 – metal machining machineries; SITC74 – general industrial machineries and equipment and machine parts, no explanation is made otherwise; SITC75 – office machines and automatic information processing instruments; SITC76 – telecommunication and sound-recording and stereo equipment and instruments; SITC77 – electrical machineries, instruments and appliances as well as parts (including non-electrical counterparts, electric home type equipment); SITC78 – road vehicles (including air cushion vehicles); SITC79 – other transporting equipment

Data source: Calculating from UNCOMTRADE data

From Figure 5, we can see that in the foreign trade of China, the total import and export amounts of commodities of such classes as SITC-74, SITC-75, SITC-76, SITC-77 and SITC-78 are high. And in Figure 6, the total import and export amounts of SITC-7 class commodities of China with the main countries in East Asian Region show a similar characteristic. The total trade amount of SITC-77 class commodities of China with the main countries in East Asia accounts for 40% of the total trade amount of China with the whole world for commodities of that class, and the proportions of other classes also reach around 30%.[24] Thus it is clear that the main industries of China participating in the production network of East Asia are distributed in electronic equipment, electrical machineries and parts and components, auto manufacturing industry, etc.

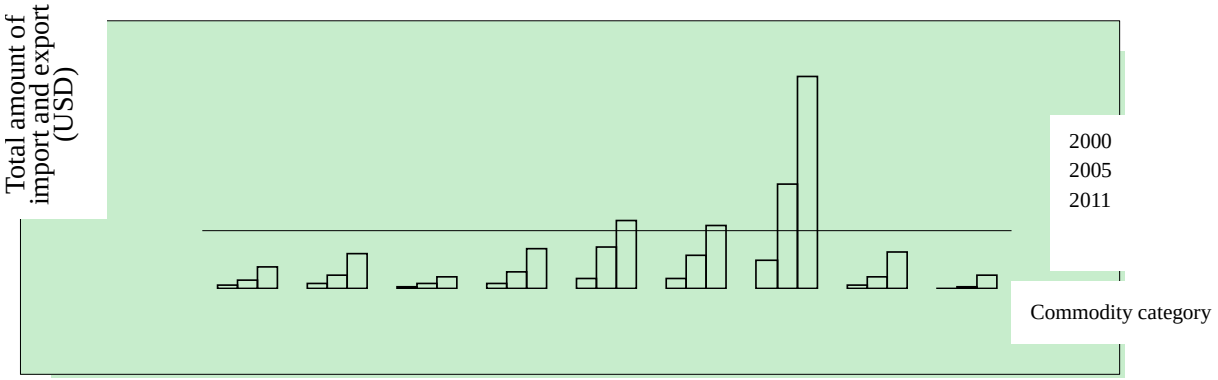

Figure 6 : Total import and export amount of SITC-7 class commodities of China with main countries in East Asian Region

Note: The East Asia here means China, Japan, Korea and main ASEAN countries

Data source: Calculating from UNCOMTRADE data

By being based on industrial cases, analysis is made using the trade volumes of electric appliance parts and components and manufactured goods. The import of electrical parts and components by China is mainly from Japan, Korea and EU and the part and component trade with ASEAN and USA is basically in a balanced state (see Figure 7). From the manufactured goods trade, the export market of China is mainly USA and the trade with other countries in the region is import indifferently (see Figure 8). That is, a great number of parts and components in East Asian Region have flown into China, which are input into other countries outside the region through simple assembly and processing. China plays a role of intermediate product trade hub inside and outside the region, that is, the trade structure of "both ends being outside" is more apparent.

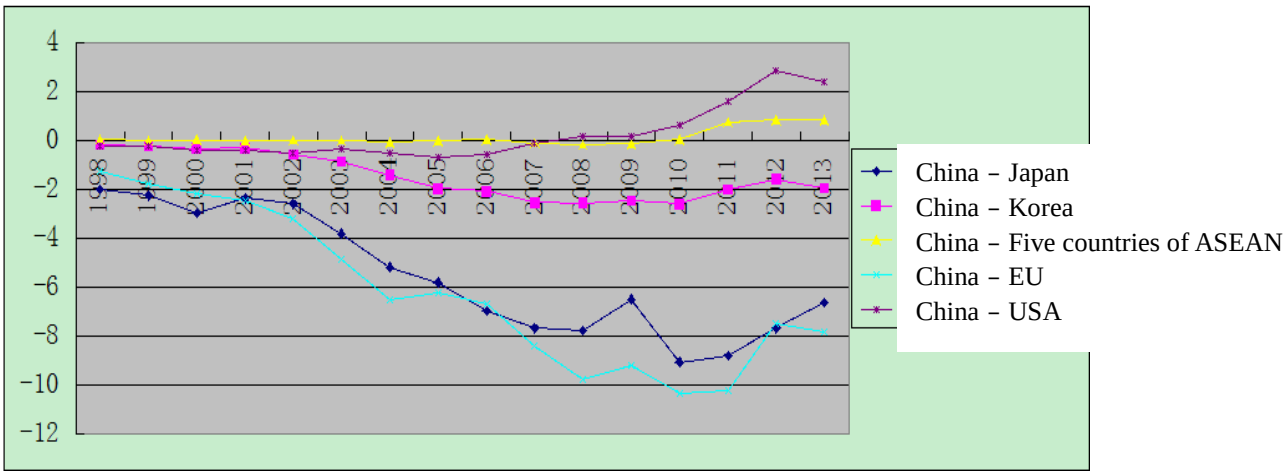

Figure 7 : Net export of electrical part and component trade of China with main countries and regions

Unit: x108 USD

Data source: Calculating from UNCOMTRADE data

Note: For the electrical parts and components herein, 8538 in HS coding is taken as the object of study.

[24] Calculating from the data in Figure 7 and Figure 8

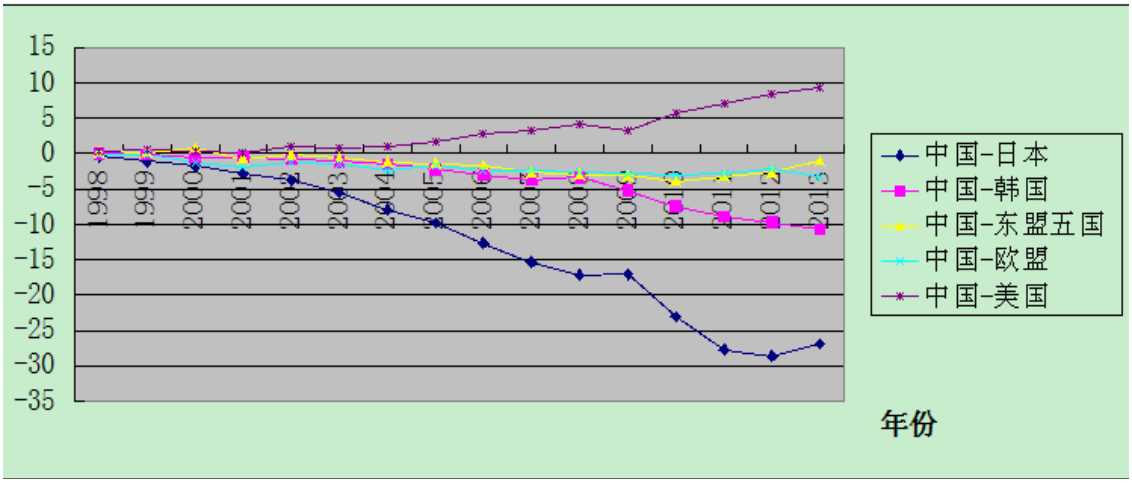

Figure 8 : Net export of electrical manufactured goods trade of China with main countries and regions

Unit: x108 USD

Data source: Calculating from UNCOMTRADE data

Note : For the electrical manufactured goods herein, 8536 in HS coding is taken as the object of study.

To sum up, with the development of the production network in East Asia, China, by depending on its advantages in rich laborers and preferential trade policies, has "embedded" quickly into the international perpendicular division system in East Asia through the processing trade with a trade structure of "both ends being outside" being formed. Although the proportion of capital goods export is increasing constantly, the transnational companies still have had labor intensive production, processing and assembly mainly transferred to China with most production capacities relying on foreign design, marketing and supply of parts and components. This not only makes the processing link of our country create a low added value with a very limited role to push the local industry and restricts seriously the self growth ability of the industries of our country, but also results in bearing the trade friction brought by overestimated trade surplus and initiates trade protectionism.

V. Policy Suggestions on Upgrading the Industrial Development of our Country in the Production Network of East Asian Region

The production network in East Asian Region has become an important part of the international production network, and has also formed a quite matured division mode within the region. Although the American financial crisis once created an impact on the production network of East Asian Region, the regional production network has been further deepened with the resumption of the world economy and more countries have joined in the region with the network coverage having become broader. As an important processing platform, China mainly participates in the bottom-end link of the industrial chain, which is not only low in added value without an important driving role for local industrial technical upgrading and industrial extension and seriously restricts the self growth ability of the industries of our country, but also results in bearing the trade friction with the developed countries in Europe and America brought by a great deal of trade surplus at the same time. For these issues, our country needs to take specific measures to upgrade the industrial position of our country in East Asian Region.

a) Increase the utilization rate of FTA by enterprises

The rapid development of free trade zones will have an important promotion to the deepening of the regional production network. However, such issues as different free trade zones' being different in preferential rules of origin, the information of enterprises about the preferential policies of free trade zones being insufficient, etc. result in enterprises having a low rate of utilization of free trade zones, which restricts seriously the development of the regional production network. According to the investigation by JETRO in 2011 in which a total of 2008 companies were investigated in Northeast Asia and the effective answering rate was 47.8%, enterprises utilizing the preferential rate of the free trade zones in export accounted for 37.2%, and enterprise utilizing the preferential rate of the free trade zones in import accounted for 33.9%; China had 26.5% companies utilizing the preferential rate of the free trade zones, the Korean was 44.1%, Malaysia was 42.9%, Singapore was 40.6%, Philippines was 37.6% and Indonesia was 64.4%.[25] From the investigation results, we can see that China is the country lowest in utilizing

[25] JETRO BANGKOK, Making Sense of Rules of Origin----Applying for ASEAN FTA Certificates of Origin.2012.

the preferential rate of the free trade zones. This not influences the profitability level of enterprises, but also restricts the degree of participation in the production network of East Asia by enterprises. At the same time, to a large degree, most companies stand in awe before the preferential rate of free trade zones due to high cost to obtain certificate of origin and long time for application for certificate of origin. The investigation made by Kawai Wignaraja shows that 10.8% Korean enterprises, 22% Thailand enterprises and 30.6% Philippines enterprises think that the time waiting for obtaining certificate of origin and management cost are the reasons to prevent their use of FTA. China has 24.3% enterprises who think that the time to get certificate of origin is long and 15.6% enterprises think that the procedure to get certificate of origin is too complicated and 16.8% enterprises are lack of people dealing with relevant free trade issues. [26] It is thus clear that the main issue preventing Chinese enterprises from utilizing the preferential rate of free trade zones is the issue of certificate of origin.

In view of the above, our country should actively strengthen training to the people in such relevant administrative organizations as customs, etc. to reduce various man-made low efficiencies. At the same time, relevant formalities of application, issuance for rules of origin should be simplified as practical as possible with existing information to be utilized sufficiently to reduce the requirements for additional data and relevant documents. IT technology should be utilized with e-certificate to be used appropriately to promote paperless procedure of application and issuance for rules of origin, shorten the application time, increase administrative efficiency and then increase the utilization rate of FTA by enterprises to promote the development of intra-regional trade. Besides, promulgation should be strengthened to increase the knowledge of enterprises about the rules of origin to avoid low FTA utilization rate due to lack of knowledge.

b) Promote medium and small enterprises to integrate into production network

At present, it is mainly large enterprises that have participated in the regional production network, which lacks small and medium enterprises very much. In order to strengthen the vigor and sustainability of the regional production network, it is necessary to take certain measures to attract small and medium enterprises to enter into the regional production network. (1) Accelerate realization of scale economy. Small and medium enterprises have a high elasticity and are able to adapt to the fast changing market needs, adapt to technical development quickly, accelerate the overflowing effect of their knowledge and technology, satisfy the requirements of large amount of orders in the international production network and realize scale economy through e-business. (2) Strengthen the relations between producers and global production chain in the perpendicular chain. On the top of the chain, strengthen the relations of national export with international buyers and global suppliers; on the bottom, strengthen the connection between high-level suppliers and lowest-end suppliers (small and medium enterprises). Transnational companies introduce small and medium enterprises into the regional production network through such forms as outsourcing, etc. This benefits both domestic employment and local capacity construction. (3) Increase the ability of small and medium enterprises to participate in the regional production network. In order to join in the regional production network, small and medium enterprises must select a specific part and component and be capable of producing products meeting the quality required by the production network and labor condition and environment. At the same time, help small and medium enterprises through cooperation between enterprises perfect their ability and strength for contest to join in the international production network. (4) Small and medium enterprises can be beneficial to the sustainable development of the regional production network. The government should take various policies to encourage transnational companies to establish links with Chinese small and medium enterprises to increase their international competitive power. The linkage of the production activities of direct investment enterprises in East Asia with the local enterprises in the host countries is divided into forward linkage and backward linkage. At present, the production activities of the transnational enterprises in the production network of East Asian Region have a low mutual correlation with local enterprises. Firstly, in terms of the local purchase objects of foreign-funded enterprises, they are mainly other foreign-funded enterprises or sub-companies within transnational companies. No close industrial alliance can be formed locally and no integration with other foreign-funded enterprises can be developed. This economy is a kind of “enclave economy”. Take Japanese transnational companies as an example, they mainly invest in manufacturing industry and mechanical industry in East Asia, which account for 59% and 45% respectively; the distributions of the transnational companies from USA in the manufacturing industry and mechanical industry in East Asia are 37% and 21% respectively. [27] Moreover, Japan’s companies mainly make transactions within companies with a strong

[26] Xu Xiangyun, Rules of Origin in East Asian FTA System and East Asian Production System, Contemporary Asia Pacific, the 1st issue, 2010, page 42.

[27] Mitsuyo Ando, Sven W.Arndt, Fukunari Kimura, Production Networks in East Asia: Strategic Behavior by Japanese and U.S firms, JCER No.103 p15.

transaction control system and emphasis being put in geographic neighbors very much. In 2004, the local purchase rate of Japan in China was 47.7%. In ASEAN, the purchase rate was 52.8%. Correspondingly, the purchase rate in the home country of Japan is high, especially in information, communication, electrical and mechanical industries. [28] Although this situation has formed a close production network in East Asia, it is not favorable to the development of local enterprises because the local enterprises can not be influenced sufficiently in technical and management aspects and an extending industrial chain can not be formed. Therefore, it is imperative to increase the local purchase rate of transnational enterprises, guide strong enterprises in the manufacturing industry gradually to make a nodal longitudinal extension, make enterprises develop from labor intensive type to knowledge and technology intensive and service type with technical R & D, sales, logistics, maintenance, etc. in value positioning, strengthen cooperation with transnational enterprises in more production links and upgrade the general growth ability in the regional production network by developing appropriate industrial policies and tax policies.

c) Guide foreign funds to flow to highly technology, capital intensive production links

In East Asian Region, such developed economic bodies as Japan, etc. take FDI as the carrier to transfer industries to such late comer economic bodies as China, ASEAN, etc. This is not only favorable to domestic industrial structure upgrading, but can also integrate the late comer economic bodies into their own regional production division systems for disperse production. For these late comer economic bodies, the introduction of FDI can solve the development fund issue and is also favorable to the upgrading of their own industrial structures and integration into the production division systems of the developed countries. Therefore, we can say that the FDI expansion in East Asian Region plays an important role to promote the formation of the production network in East Asian Region.

According to statistical data, the developing countries in East Asia are attracting foreign investment actively and the proportion of FDI introduction in the world is in a rising trend, which reduced only in 1997 when Asian economic crisis broke out and under the influence of the financial crisis in 2008. In 2010, the proportion of FDI attracted by the developing East Asia in the world was nearly 30%, which increased by two times in comparison with 10.55% in 2000. Specifically, the FDI attracted by the developing East Asia increased from USD 147.787 billion in 2000 to USD 423.157 billion in 2011, in which the FDI attracted by China increased from USD 40.715 billion in 2000 to USD 123.985 billion in 2011; the total FDI introduction by the ten countries in ASEAN increased from USD 22.696 billion in 2000 to USD 116.559 in 2011. [29]

It is no doubt that introducing foreign funds in a large quantity plays an important role for the economic development of China. However, in recent 20 years, the foreign fund introduction by China has not been taken as means of study mainly aimed at independent development. It is necessary to incorporate foreign funds into the balanced industrial development of China purposely and restrict strictly foreign funds to enter continually into the industries with excessive competition, high resource consumption, serious pollution and poor industrial correlation. It is imperative to use such policies as taxation, etc. to guide foreign funds into the industries with a high technical, capital intensity, upgrade the technical R & D ability of our country. Only in this way, can industrial self growth be strengthened, impact resistance upgraded and the position in the international industrial chain changed, technical upgrading and structure adjustment promoted.

d) Participate in TPP actively to expand the international space of the production network in East Asia

TPP was initially a small multilateral trade arrangement entered into by such four countries as Singapore, New Zealand, Chile and Brunei in APEC framework in 2005. However, being different from the past economic cooperation agreements, TPP increased "strategic cooperation" contents, which cover such contents as intellectual property protection, labor standards, environment standards, promoting the development of small and medium enterprises, etc. In 2009, USA joined in TPP, and took TPP as an important way for it to promote American trade rules in Asia. At present, TPP has included such 12 member countries as Singapore, New Zealand, Chile, Brunei, Australia, USA, Peru, Mexico, Canada, Malaysia, Vietnam and Japan. The total regional GDP can reach forty percent of the world economy. That agreement is not only wide in coverage, but once it is initiated, 95% commodities become zero custom duty level automatically. The simple average custom duty rates of the 21 economic bodies in APEC and the 12 existing TTP members are 5.7% and 4.5% respectively. However, that rate of China is as high as 9.6%. This means that if China does not join in TPP, the East Asian countries which have close trade contacts with China originally may change their trade and investment directions. According to latest reports, such shoe enterprises as Nike, etc. investing in Fujian China originally are shifting to Vietnam and Malaysia. Therefore, on one hand, our country should

[28] Chen Jianan, Industrial Division System of East Asia and its Structural Unbalance, Study on World Economy, Issue 4, 2008, pages 78.

[29] Un comtrad Stat-Statistical database, UNCTAD.org

increase capital, technology intensive enterprises, improve the international competitive power of products, be in line with international norms in such aspects as labor standards, environmental protection and prepare for joining in TPP in future; on the other hand, our country should strengthen the linkage with EU, Africa to expand the space of the international production network, attract the funds and technologies from EU and make the transnational enterprises in EU be embedded in the industrial chain of East Asia gradually; at the same time, our country should make a sufficient use of the African cheap resources and laborers to become a low end of the industrial chain in East Asia. Thus, a complete international production network will be formed, which can not only maintain continuity of funds and technologies, but can also solve the problems brought by the lack of resources and continuous increase in labor costs in East Asia. As an important economic body in the production network of East Asia, our country needs to strengthen the linkage with EU and Africa and become an important platform to promote the economic contacts between East Asia and the external world. If we can establish a free trade zone with EU and Africa respectively, China will become a hub country in regional cooperation. This will play a strong promotion role in the development of our country and East Asia.