TRADE IN VALUE ADDED AND EMERGING MARKET ECONOMIES: ANALYSING THE ROLE OF CHINA IN WORLD TRADE NETWORK

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Abstract
China has emerged as the major exporter and importer of goods and services in the world market. With its accession to World Trade Organisation (WTO) in 2001 there has been a tremendous growth in its exports as well as imports. Presently China is the major exporter with 12.5% share in the world exports and 10.4% share in world imports. It is the only nation that has registered a increase in its share in exports and imports after its accession to WTO. Taking into account its role in global production network it has become the major destination of the developed economy for assembly of the products and China is the major destination and investor of foreign capital in the world market.

This paper analyses the China's role in global trade and investment network. Its role is in the global trade is measured in terms of its contribution to global exports and imports. This paper is divided into two parts- first part deals with the importance of China in global trade network as an exporter and importer of finished goods. Second part is devoted in analysing its importance in global production network.

For achieving the objectives the change in exports and imports over the period of 14 years (post WTO accession) has been studied i.e. 2001-2014 with focus on the change in the export as well as import basket of China. China's role in production network will analyse the share of intermediate products in total exports and imports. This will be done by comparing the domestic and foreign value added content in the gross exports and imports of China. Secondly with respect to contribution of China to the other countries gross exports will analysed, this will be achieved by finding out the origin of the value added in gross exports of the major economies of the world with specific reference to China.

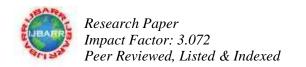*Keywords: Value Added, Services, Origin, Intermediate, Accession.*

Introduction
Chinese export dramatically increased in early 2000s when China entered into the World Trade Organization (WTO). It is well known that the nations participating in the WTO removed trade barriers by liberalizing and reforming their economies. China also was not exceptional. The Chinese government significantly restructured and modernized the economy to meet WTO standards and gain acceptance in December 2001. To do so, they enacted policies that reduced import tariffs on a variety of goods, improved market access, and eliminated regulations to export including the trading right system. Chinese accession of the WTO also enabled China to receive the most favorable nation treatment as a member country of the WTO, which improved the access of Chinese exporters to foreign markets. There is no doubt that China's entry into the WTO had a significant impact on its international trade in the 2000s. In the WTO accession, Chinese government also was requested to reform state-owned enterprises (SOEs) whose number was not negligibly small in export. Chinese government aligned domestic regulations with international standards by privatizing and restructuring state-owned enterprises (SOEs) prior to entry into the WTO (an endeavor that was started under Prime Minister Zhu Rongji before negotiations with the WTO). This is a different feature of Chinese exporters from other countries. Many studies have empirically examined the effect that China's entry into the WTO had on international trade.

Literature Review
The work of Nadeem Ahmad deals with the analysis of OECD WTO January 2013 data, He analysed the transport and electronics sector specifically and computed the domestic and foreign value added content in gross exports for the available countries. He also emphasised on the role of services in exports as per his estimates the share of services in exports for OECD countries is more than 50%.

The work of Rashmi Banga(2013) applied OECD WTO TIVA May 2013 database for measuring the participation of a country in GVCs. What she found that 67% of the total global value created under GVCs accrue to OECD and whereas the share of NICs and BRICS countries is only 25%. Her paper also highlighted the role of services in the total value added exports.

The paper by Amador J. et. al. (2013) worked on finding out the domestic and foreign value added content in exports he applied the Koopman(2013) and Stehrer (2013) formula. Their study covers the period 2000-2011. The results show that

intra euro-area GVCs are strong and only marginally weakened during the rebound in 2011 after the global trade collapse. Between 2000 and 2007 the euro area favored the reinforcement of "regional integration of production" among member countries, even in a period of fast spreading of value chains at the global level. Taking the average euro area country, the share of value added originated in other euro area countries in gross exp orts was equal to 11.6 percent in 2007 (16.6 percent if the value added sourced from all the E U countries is considered).

Branstetter and Lardy (2008) assert that in addition to Chinese achievement of a greater degree of openness to foreign trade in manufactures prior to WTO accession, the additional openings mandated under China's WTO accession agreement likely made China's economy the most open of any large developing country, and China made reasonable progress toward meeting her obligations. In regards to exports, by calculating firm-level total factor productivity (TFP) in China's manufacturing sector, Brandt et al. (2012) shows that Chinese economy recorded a higher TFP growth after the WTO accession than before and a significant part of TFP growth attributed to the effect of firm's entry and exit that China's decentralized reforms have increasingly allowed. Yu and Jin (2014), using Chinese transaction-level trade data and firm-level production data from 2002 to 2006, observe the significant, positive impact of imported intermediate inputs on firm productivity. Elliott and Zhou (2013) show that exporting SOEs are the most productive of all possible firm groupings, though foreign-owned firms are more productive than non-exporting firms. They attribute the high productivity of SOEs not only to greater motivation (especially in larger SOEs), but also to increased competition from international markets. Although there have been many studies on the effects of China's entry into the WTO on productivity growth and trade, we find few studies examining whether the rapid increase of Chinese exports is related to entry into the WTO and the reformation of Chinese market, in particular the effort of privatizing and restructuring SOEs.

Objectives
1. Analysing the change in export and import share of China in world exports and imports.
2. Analysing the value added trade of China- Domestic and Foreign Value Added and Domestic and Foreign Value Added by services in gross exports of China.
3. Tracing out the origin in gross exports of China.

Methodology
Present study is based on the secondary data and the information with respect to the export and import share of China in the world exports and imports is extracted from the website of the International Trade Center(ITC)- TradeMap. Data on the Value Added Trade of China is extracted from the TIVA- Organisation for Economic Cooperation and Development (OECD) website. The period of study is 2001-2014.
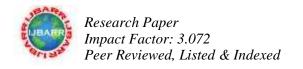
Findings
Table1.1 shows the share of China in world exports and imports, its export share has constantly increased from just 3.9% in 2000 to 12.5 in 2014 and on the other hand import share which was just 3.4% in 2000 rose to 10.5% in 2014 and presently China is ranked first and second in world exports and imports.

Table 1.2 shows the brif information on the share of China under different category. For comparing the China's performance 1995 and 2011 are selected and comparing he figures of China for the selected years it can be een that major change to China happens in case of share of intermediate products in China gross exports and imports. The share of intermediate products in gross exports has increased from 50.765 to 55.92 whereas the share of intermediate products in gross imports increased from 70.66% to 80.39% for the same years. With respect to other variables no major change has taken place and the share has remained nearly smae or has reduced over the previous years.

Table 1.3 shows the origin of value added in the gross exports of the OECD and BRICS nations for the year 1995 and 2011. It can be seen that overall share of BRICCS country in value added to total gross exports of OECD member countries have increased from 1 % in 1995 to 4.44 % in 2011, thereby increasing by almost 3.43% over the period of 17 years. Share of China and Russia increased by 1.77% and .84% over the same years and on the other hand domestic value added cont in the exports have decreased from 96.94% to 89.99 % for the same period.

On comparing the contribution made by emerging market economies to the gross exports of the country/group value added content in exports by BRIICS, China, Indonesia, Russia and South Africa have registered a fall in the share of OECD member countries share in value added exports and among them China registered a maximum reduction of around 3%. For Brazil the share of OECD member countries have remain constant whereas for India the share of OECD member countries have increased from 5.03% to 8.73% for the same period.

Coming to the contribution made by EME's to the gross exports of the country/group it can be seen that EME's contribution has increased from 1995 level for all the countries under study plus OECD member countries. Maximum increase happens to OECD (3.43%) countries followed by India (3.17%) and South Africa (2.17). China is the only country which has registered the lowest increase over the period under study and at the same time share of OECD countries has also decreased from its 1995 level.

Conclusion

Thus from the above study it can be concluded that with the accession of China to WTO and opening of the domestic economy to the world players has not only benefitted China in the form of increased exports and reaching the top position in the fourteen years time period but has also increased the exports of the other nations in the form of increased imports to China. Secondly with respect to value added trade it can be seen that China has emerged as the major importer and exporter of intermediate products in the world market and its share has increased over the period of time.

Thirdly tracing out the origin of value added in gross exports of China one can clearly see that once the major share was of the OECD nations which has came and the share of emerging market economies has seen an increase in their share to China.

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Annexture

Table 1.1:China Share in World Merchandise Exports & Imports						
Year	**Exports**			**Imports**		
	Rank	**Share%**	**Value(Bn. $)**	**Rank**	**Share%**	**Value(Bn. $)**
2000	7	3.9	249	8	3.4	225.1
2005	3	7.3	762	3	6.1	660
2010	1	10.4	1578	2	9.1	1395
2012	1	11.1	2029	2	9.8	1818
2013	1	11.8	2209	2	10.4	1949
2014	1	12.5	2342	2	10.5	1958
Source: Authors calculation using Trade Map						

Table 1.2: Brief Summary			
S.No.	Particulars	1995	2011
1	Share of Intermediate Products in Gross Exports	50.76	55.92
2	Share of Intermediate Products in Gross Imports	70.66	80.39
3	Share of DVA Contents in Gross Exports	66.51	67.57
4	Share of FVA Contents in Gross Exports	33.49	32.43
5	Share of DVA by Services in Gross Exports	26.63	27.59
6	Share of FVA by Services in Gross Exports	16.81	14.23
Source: Authors calculation using Tiva Database.			

Table 1.3: Change in Origin of Value Added in Exports(%) of OECD and BRIICS(1995-2011)						
1995						
Origin of Value Added	Exporting Country					
	OECD	Brazil	China	India	Indonesia	Russia	South Africa
OECD	96.94	5.37	22.63	5.03	8.91	9.64	9.7
Brazil	0.13	92.19	0.21	0.05	0.1	0.06	0.1
China	0.22	0.04	66.65	0.13	0.25	0.15	0.12
India	0.07	0.02	0.14	90.66	0.12	0.15	0.07
Indonesia	0.16	0.03	0.59	0.12	87.48	0.04	0.04
Russia	0.33	0.06	1.2	0.31	0.15	86.78	0.07
South Africa	0.11	0.08	0.17	0.12	0.03	0.04	86.88
Total of EME*	1	0.23	2.3	0.73	0.66	0.43	0.39
2011						
	OECD	Brazil	China	India	Indonesia	Russia	South Africa
OECD	89.99	5.85	19.12	8.73	4.31	8.99	7.56
Brazil	0.34	89.26	0.71	0.39	0.18	0.11	0.21
China	1.98	0.81	67.89	2.03	1.25	1.39	1.33
India	0.4	0.33	0.65	76.01	0.4	0.19	0.66
Indonesia	0.39	0.09	0.65	0.63	88.02	0.07	0.13
Russia	1.17	0.23	0.91	0.45	0.31	86.28	0.24
South Africa	0.16	0.06	0.31	0.39	0.06	0.06	80.55
Total of EME*	4.44	1.5	3.23	3.89	2.2	1.82	2.57
* It denotes the share that emerging market economies contribute to the gross exports of country/group under study.						
Source: Authors Calculation from OECD Tiva June 2015						