Preferential RoO - Facilitators of Regional and Global Value Chains

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ABSTRACT

Many studies have focused on Regional Trade Agreements (RTAs) as well as on Rules of Origin (RoO). These have mostly seen how stringent RoO act as a deterrent to regional trade. Only a few studies have discussed the development role that preferential RoO play. With the help of the OECD-WTO database on TiVA (Trade in Value Addition) many researchers are now focusing on the existence of regional and global value chains. Most of these new studies are linked to country case studies with a focus on global trade. A very limited number of studies have focused on the linkages between the preferential RoO and regional or global supply chains. Is it possible to promote regional value chain with the most simple RoO or there is a need for some onerous manufacturing obligations or the so-called 'restrictive RoO'? This paper analyses the case of the so-called restrictive RoO with regard to Mexico, Sri Lanka and Bangladesh to examine whether these RoO facilitate these countries in becoming a part of regional value chains or not. The study relies on the ex-post facto analysis of trade data to explore this relationship using various techniques. It finds that in these cases, the existence of more onerous RoO criteria were instrumental in integrating these countries with larger economies by way of greater linkages among the industries, thereby facilitating the regional value chains. The study also finds that the value added criteria will be able to promote greater regional value chains through provisions of cumulation rather than the CTC (Change in Tariff Classification) criteria.

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The views and opinions reflected in this paper are that of the author alone.

1. Introduction

In recent times two subjects have been drawing greater attention of researchers: the surge in regional trade agreements ("RTAs") along with an increase in the complexities of Rules of Origin ("RoO") and the regional/global value chains ("RVCs"/"GVCs"). RTAs are drawing attention due to the fact that negotiating countries are undertaking commitments on issues which they opposed in the multilateral talks. This raises the question of whether such RTAs pose a challenge to multilateralism or not. Another issue that is drawing attention is to examine how the formation of regional or global value chains as a part of international production networks is taking place, as the present trading environment has emerged from the fragmentation of production and distribution of manufacturing activities in different parts of the world. It has become important to understand at which stage of a value chain a particular country is positioned and how much real value is being contributed to the economy, even when the country is at the highest end of production network. However, till now little attention is given to understand the linkages between these two issues and how they are related with each other. This paper examines some free trade agreements ("FTAs") and explores the relationship between the preferential Rules of Origin which are integral part of these FTAs and the production networks or value chains. The paper uses the cases of the North American Free Trade Agreement ("NAFTA"), the India-Sri Lanka FTA and Bangladesh's Ready Made Garments ("RMG") exports to EU under the Generalized Scheme of Preferences ("GSP Scheme") to explore their relationship with RVCs/GVCs and evaluate if the RoO have been able to facilitate the regional and global value chains.

2. Rules of Origin

The term 'Rules of Origin' speaks for itself. It refers to criteria that need to be fulfilled for determining the origin of a product for granting preferential treatment by RTA partners. The objective of preferential RoO is to promote intra-regional trade and to prevent trade deflection, or simple trans-shipment. RoO can also play a developmental role for the RTA partners. By their design they enforce value addition in exporting country and augment intra-RTA trade through the provisions of cumulation, thereby leading to a greater economic activity in RTA partners. Thus, RoO integrate RTA partners and promote regional value chains through backward-forward linkages of industries. Substantial transformation is often called 'sufficient manufacturing or processing'. Determination of origin of manufactured goods is done on the basis of certain manufacturing requirements which should be carried out in order to guarantee a certain amount of manufacturing taking place in the country which is party to RTA. Substantial transformation in most of the RTAs is usually defined in terms of a minimum value added content that must be met by the exporting country in order to grant origin. Another criterion that is used is in terms of the Change in Tariff Classification ("CTC") between non-originating inputs and export product. The most common CTC is Change in Tariff Heading ("CTH") which means that there shall be a change at the 4 digit Harmonized System ("HS") level. In several RTAs a combination of these two criteria are used, which is treated as the most stringent.

Regional value chains can be established through the process of cumulation, which allows trade in raw materials and intermediate products among the RTA partners in order to meet the substantial transformation criteria. Requirements relating to checking the import content or value addition have the potential for generating higher degree of manufacturing operations among the RTA

partners and these at times facilitate higher intra-industry trade. In order to meet the substantial transformation criteria, especially if this is a value added criteria (where a ceiling on percentage of non-originating inputs are prescribed), a country seeking preferences for its export products has to ensure that higher manufacturing process takes place in that country. Such manufacturing process has to go beyond simple operations like simple assembly operations, packing and repacking etc. The presence of large SMEs (Small and Medium Enterprises) and the fragmentation of production could create tremendous opportunities to get in these international production networks within the RTA members.

To increase intra regional trade and facilitate the sourcing patterns within the region, in the context of an RTA, the concept of cumulation plays a crucial part in RoO. Cumulation is an instrument allowing producers to import materials from another RTA partner country without undermining the origin of the product. It extends the possibility of using low cost inputs, without compromising on the originating status of a final export product as the intermediate products are sourced from RTA partner (Please see Box 2 for illustration). Through regional integration, especially in terms of cumulation and value added criteria, the exporting country not only sources cheaper raw material/inputs from the RTA partner but through the backward-forward linkages among industries, flow of technological knowhow also happens. This, thus, enhances production efficiency for a particular country, which, in turn, enhances the possibilities of getting into the global market as the country is able to diversify its production of high quality product. At the same time, the RTA partners create supply chain among themselves for the finished product that is for the international market i.e. outside the RTA zone and thus this also facilitates global supply chain.

The objective of preferential market access is to reduce the cost of trade for the RTA members which can also be done through the cumulation provisions of RoO over and above tariff reductions. RTA partners can promote development of certain productive activities (sectors) by making them more cost-efficient. Thus RoO can be used as a tool to promote establishment of a value chain within the region as they can ensure the supply of cheaper and/or higher quality intermediate inputs. RTAs having different economies - one large and another small - can grant greater benefits to the smaller partners as the country can effectively become a part of a regional value chain. This is because its industries can be linked to the industries of the larger economy. Countries which suffer from limited supply capacity, in terms of quantity, quality and variability of products, can benefit from the expansion of intra-RTA trade and resulting integration through the cumulation provisions in the RoO. The most basic form is bilateral cumulation, which applies to materials provided by either of two partners of an RTA. A comparison of different types of cumulation provisions is given below:

BOX 1: ABCs OF CUMULATION

Bilateral cumulation
Bilateral cumulation is the most basic form of cumulation as it operates between two parties and allows producers in either partner country to use materials and components originating in the other's country as if they originated in their own country.
Diagonal cumulation
Diagonal cumulation operates between more than two countries and allows producers to use materials and components *originating* in either country that is part of the agreement. In one form this is an extension of bilateral cumulation by extending it to the regional level.

Partial cumulation
Partial cumulation is the most common form of cumulation under which an input originating in one member of a Preferential Trade Arrangement ("PTA") will be considered as originating input in other member country(ies) of PTA. In such a case the full value of the input/material is taken as originating and not the actual value content of processing in the PTA partner. On the other hand if the input is not originating the value added in one country is totally disregarded as it does not meet the origin criteria.
Full cumulation
Full cumulation takes into account all of the operations conducted within the countries who are members to PTA - even if they are carried out on non – originating material. Thus, there is no more restriction to only use originating materials and components for the final good. This concept allows more fragmentation of the production process among members of a trade agreement and increases economic linkages and trade in PTAs.

(Source: Das and Ratna, 2011)[1]

How cumulation promotes regional value chains by enhancing the intra-regional trade can be illustrated by the following illustration (Box 2):

BOX 2: CUMULATION: HOW IT PROMOTES VALUE CHAIN?

The box illustrates the case of ASEAN FTA.

A manufacturer in Viet Nam produces transmission line for motor vehicles. He plans to export the transmission line to the ASEAN market and uses the inputs which are sourced from Indonesia (another member of the ASEAN) and from China (which is outside the ASEAN). The process of manufacturing by using different inputs are as follows:

Description of Materials/Others		Origin	Origin Status	Value (US$)
a.	Part A	Viet Nam	Originating	1500
b.	Part B	Indonesia	Originating	1500
c.	**Part C**	**China**	**Non-originating**	**2000**
d.	Other costs + profit	Viet Nam	Originating	500
	F.O.B Price (a+b+c+d)			5,500

The ASEAN FTA RoO prescribes that regional value content (RVC) must be at least 40%.

Part B which is produced in Indonesia is considered to be originating in Viet Nam due to the cumulation rules. In this case, the transmission line will be considered as originating due to the following calculation:

RVC = [(5500 – 2000)/5500]X100 = 63.6% and thus it will get preference in ASEAN market.

However, if the cumulation was not allowed in ASEAN rules of origin, the calculations would have been:

1 Ram Upendra Das and Rajan Sudesh Ratna, *Perspectives on Rules of Origin: Analytical and Policy Insights from the Indian Experience* (London: Palgrave Macmillan, 2011).

RVC= [(5500 – 3500[2])/5500]100 = 36.3% and therefore will not get preference when exported from Viet Nam.

(Source: ESCAP, 2013)

One important point that should be stressed while determining the origin of a product under cumulation provisions, especially in the case of Asia -Pacific, relates to the minimal value added criteria in the exporting country. ESCAP (2013) points out that in the SAFTA ("South Asian Free Trade Agreement"), the overall regional value added under the cumulation provision is 10% higher than the single country obligation of 40%. Additionally, for regional cumulation the agreement prescribes that within the aggregate regional content of 50%, at least 20% value added must come from the final exporting country. A similar provision exists in India-Sri Lanka FTA where under regional cumulation an overall value added of 35% is prescribed with a minimum of 25% coming from the exporting country. This means that the other country is allowed to do a value addition of only 10% under the regional cumulation. Similarly in the APTA (Asia-Pacific Trade Agreement), the regional value added content for cumulation is 60% (15 percentage points higher than single country value added). In the case of ASEAN FTA, there is no such extra obligation on the final exporting country to have a minimal valued added, thus with only a total value addition of 40% within ASEAN members a product will get the originating status. In ATIGA (ASEAN Trade in Goods Agreement),

ASEAN has used a combination of partial and full cumulation by allowing alternative routes. However, full cumulation has put some restrictions through the requirement of minimum value added content of at least 20% in order to enjoy this benefit. It has been observed that cumulation provisions are not designed to create a 'regional or PTA identity' of a product and thereby act against the actual objective of regional integration for creating supply chains within the bilateral/plurilateral/regional PTAs. Baldwin and Kawai (2013) pointed out that for small nations the bilateral cumulation hinders their prospects of sourcing of inputs since they need to import many inputs from different countries for manufacturing export products.[3] They, therefore, suggest for a broader rules for cumulation so as to reduce the restrictiveness of regionalization.

Unfortunately, in the Asia-Pacific region, the current situation is such that among several types of RoO frameworks that are in existence, the RoO vary significantly, even in cases involving the same countries but different PTAs. Among the ASEAN+1 agreements themselves, there are 22 different RoO types and furthermore only 30 percent of the tariff lines share a common RoO. In each PTA, there are several criteria for determining origin and therefore, harmonizing them is one of the most difficult tasks (Menon, 2013) even though it is almost certain that such an exercise would contribute to intraregional trade and facilitate sourcing from the lesser developed countries[4].

In the EU GSP rules, as revised and made effective from 2011, the cumulation rules prescribe a concept of "regional origin" instead of a single country origin or 'global cumulation', especially in

2 Indonesian input = 1500 USD and Chinese input = 2000 USD (a sum of 3500 USD as Indonesian input will be treated as non-originating without cumulation provision).

3 Richard Baldwind and Masahiro Kawai, "Multilateralizing Asian Regionalism," *ADBI Working Paper Series, no. 431* (August, 2013).

4 Jayant Menon, "The Challenge Facing Asia's Regional Comprehensive Economic Partnership," *East Asia Forum, Vol. 23, 2013*, http://www.eastasiaforum.org/2013/06/23/the-challenge-facing-asias-regional-comprehensive-economic-partnership (accessed June 23, 2015).

the context of least developed countries. The products are deemed to originate in the last country (in the group) of final processing. Regional cumulation between countries in the same regional group applies only when the working or processing carried out in the beneficiary country, where the materials are further processed or incorporated, goes beyond "minimal" operations. Under the European Union rules for partial and regional cumulation, materials or parts imported by a member country of one of the four notified groupings[5] from another member country of the same grouping for further manufacture are considered as originating products of the country of manufacture and not as third-country inputs, provided that the materials or parts are already "originating products" of the exporting member country of the grouping. Originating products are those that have acquired origin by fulfilling the individual origin requirements under the basic rules of origin for GSP purposes. For example, European Union rules of origin require cotton jackets (HS 6203) to be produced from "originating" yarn. With regional cumulation, however, preference-receiving country A may utilize imported fabrics from country B (note that these fabrics must already have originating status B), which is a member of the same regional grouping, and the finished jacket will be considered as an originating product. This is because the imported fabric, which, again, must already have come from an originating producer in the same grouping, is counted under the cumulation rules as a domestic input and not as an imported input.

3. Literature survey

Global value chains have become an important component of today's international trade and are no longer confined within domestic borders or a single firm. Production now involves multiple countries and multiple firms with complex webs and several layers of interaction. Empirical evidence suggests that the emergence of international production networks ("IPNs") in East Asia resulted from market-driven forces such as vertical specialization, higher production costs in the home country and institutional factors such as free trade agreements (Kimura and Obashi, 2011).[6] Recent literature suggests that countries engaged in global value chains have shown enhanced access to regional and global economies, improved production techniques and greater capacity to generate employment (Banga, 2013).[7]

The IPN could be established to promote regional value chains through preferential RoO as the intra-RTA trade and investment flows could be influenced by the cumulation provisions. Nag and De (2011) have noted that RoO play a significant role in promoting trade in low value components and although tariff reduction is the most important tool for making a trade agreement work efficiently,

5 Regional cumulation between countries within the same group applies to the following four separate regional groups:
   (a) Group I: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, Viet Nam;
   (b) Group II: Bolivia, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Peru, Venezuela;
   (c) Group III: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka;
   (d) Group IV: Argentina, Brazil, Paraguay and Uruguay.

6 Fukunari Kimura and Ayako Obashi, "Production Networks in East Asia: What We Know So Far," *ADBI Working Paper Series*, no. 320, November, 2011, http://www.adb.org/sites/default/files/publication/156175/adbi-wp320.pdf (accessed April 12, 2016).

7 Rashmi Banga, *Measuring Value in Global Value Chains*, UNCTAD Background Paper no. RVC-8. (Geneva: UNCTAD, 2013).

RoO can act as a catalyst even if tariff rates are not so low.[8] They further noted through regression analysis that a higher RoO restrictiveness index inhibits the positive growth of intra-industry trade.

Medalla (2011) examined the nexus between RoO and value chain in the ASEAN-plus one agreements. He found that the type of applicable RoOs (especially in terms of restrictiveness), the number of FTAs the exporter has to deal with, along with the Operational Certification Procedures (OCP) would have impacts on RoO compliance costs, and thus on the global value chain. He concluded that so long as these costs add up to less than the margin of preference provided by the FTA, exporters benefit and the FTA would have a positive impact on the value chain.[9] Estevadeoral et al. (2013) observed that the regional pattern of GVCs is largely determined by the existence of regional trade agreements, particularly deep ones, because they tend to incorporate disciplines like rules in investment policy, services, standards, intellectual property rights or the harmonization of custom procedures considered to be important for the multifaceted mix of trade, investment and knowledge flows associated with GVCs.[10]

In the past, several studies have examined the benefits of NAFTA. Hummels (1998) observed that the "regionality" of supply chains is intrinsically related to certain agreements and/or arrangements that occur across countries. He noted that before the 1965 US-Canada Auto Agreement, trade in auto parts between these two countries practically did not exist. After the 1965 agreement reduced the tariffs to zero, auto trade soared, igniting a successful US-Canada auto supply chain in which 60% of US auto exports to Canada were engines and parts, while 75% of Canadian auto exports to the US were finished cars and trucks.[11]

Gereffi and Martinez (1999) pointed out that the NAFTA brought a change in the rules of the game for producers in Mexico, especially for the apparel industry. A transformation in production activities in the Torreón region happened, which in 1993 was dedicated as a region exclusively to apparel assembly. By 1996 Mexican-made denim, trim, and labels were used for blue jean exports, and even laundering and finishing were carried out in Mexico. By 1998, cutting and distribution processes were emerging in the region as well. They also found that the apparel is an industry characterized by labor-intensive work, not by state-of-the-art technology. However, many American companies with high status and valuable brand names did not want to be associated with a production system that could be accused of exploiting labor. For example, Levi's expected its subcontractors to build new plants with modern equipment because that would be the only type of production with which they wanted their products identified. Although cheap labor continued to be one important reason for U.S. operations in Mexico, companies with advanced technology strategies and big production volumes made considerable investments. For example, Wrangler spent $40 million in the construction of one plant for cutting, assembly, and laundering, while Kentucky-Lajat spent approximately the same amount in its laundering and finishing facility. The Cone-Parras joint-venture denim mill required an investment of nearly $100 million.

8 Biswajit Nag and Debdeep De, "Rules of Origin and Development of Regional Production Network in Asia: Case Studies of Selected Industries," *ARTNeT Working Paper Series*, no. 101, (May 2011).

9 E. M. Medalla and M. A. D. Rosellon, "ROOs in ASEAN+1 FTAs and the Value Chain in East Asia," in *ERIA Research Project Report 2010-29*, ed. C. Findlay (Jakarta: ERIA, 2011), 156-184.

10 Antoni Estevadeordal et al., "Global Value Chains and Rules of Origin," *E15 Expert Group on Global Value Chains: Development Challenges and Policy Options*, December, 2013.

11 D. Hummels, D. Rapoport, and Kei-Mu Yi, "Vertical Specialization and the Changing Nature of World Trade," *Economic Policy Review* 4, no. 2 (1998).

These investments demonstrate that NAFTA had attracted companies with a great diversity of strategies concerning labor-capital relationships, with a number of them focused on efficient and modern production systems, while bringing Mexico in the higher value chain in textiles sector.[12]

While analysing the empirical evidence after 6 years of implementation of NAFTA, Sanchez and Karp (2000) found that the average annual investment flow tripled for Mexico during the periods of 1985-1993 to 1994-1999, with an increase in average ratio of FDI to GDP and the largest investor was USA. They estimated that the NAFTA led to a 25 percent annual rise in FDI growth rate. In turn, for each percentage point rise in FDI growth rate there has been a 0.11 and 0.12 percent increase in the maquiladora and the non-oil, non-maquiladora export growth rate respectively.[13]

Haufbauer and Schott (2005) noted that NAFTA was successful in promoting economic growth by not only increasing competitions in domestic markets but also promoting investments from both domestic and foreign sources. For Mexico, the FDI increased not only from the USA and Canada but outside NAFTA also. It is also pointed out that the restricted rule of origin in textiles, apparel and auto were main cause of use of intermediate materials from other NAFTA members, leading to increase in intra-NAFTA trade and investments flows.[14] Ahmad (2007) looked at USA's imports of textiles and clothing from top 30 preferential suppliers and noted that during 1990-2000 Mexico's share ballooned from 2.4% to 13.5%. He also observed that Mexico's 83% of exports to USA qualifies for NAFTA benefits, while remaining 17% comes under MFN tariff due to strict RoO of yarn forward rule.[15]

Developed countries have often used the rules of origin for developmental purposes, though in some cases they do act as NTBs (Non Trade Barriers). NAFTA is a case in point. For the automotive sector different percentages of the regional value content are laid down for various phases, for instance, 56 per cent between 1998 and 2002 and 62.5 per cent thereafter for some categories of motor vehicles. In the case of textiles and apparel, there is a "triple-transformation test" that requires fabrics or clothing items to be spun from yarns or fibres produced in North America as well as to be cut and sewn within the FTA. Cutting does not determine the country of origin as the new rules are based on processing or assembly operations.[16]

4. Methodology

This study examines the examples of NAFTA, India-Sri Lanka FTA and Bangladesh's RMG exports to EU. In this regard, the analysis of trade and investment linkages has been used as a parameter to examine

12 Gary Gereffi and Martha A. Martinez, Blue Jeans and Local Linkages: The *Blue Jeans Boom in Torreón, Mexico,* World Bank Working Paper 27906 (Washington DC: World Bank, October 1999), http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2004/02/25/000265513_20040225125354/Rendered/PDF/wdr27906.pdf (accessed April 12, 2016).

13 Manuel Sánchez and Nathaniel Karp, "NAFTA's Economic Effects on Mexico" (paper presented at NBER 12th Annual Inter-American Seminar on Economics, Buenos Aires, December 2-4, 1999).

14 Gary Clyde Haufbauer and Jeffrey J Schott, *NAFTA Revisited: Achievements and Challenges* (Washington DC: Institute of International Economics, 2005).

15 Munir Ahmad, "Impact of Origin Rules for Textiles and Clothing on Developing Countries", *ICTSD Programme on Competitiveness and Sustainable Development, International Centre for Trade and Sustainable Development,* no.3 (2007).

16 Das and Ratna, *Perspectives on Rules of Origin.*

if the RoO have played a positive role in regional integration and, thereby, generating greater economic activity. However, the limitation of this analysis is the lack of preferential trade data or data on investment which went under the RTA. The analysis is done on the basis of available data which includes MFN trade as well as preferential trade, thus, a bias regarding the estimates cannot be ruled out.

To examine the linkages between RoO and value chains, the trade patterns of certain sectors were evaluated over a fixed time period for different agreements. Here the patterns of trade of finished and related inputs at 2 digit HS level have been used. For textiles sector Standard International Trade Classification (SITC) version 3 was used with the classification of garments, fabrics and yarn. An intra-industry trade ("IIT") index was calculated using the Grubel-Lloyd method, with the index ranging between 0 and 1. The value indicates the extent of bilateral trade on similar products. A higher IIT indicated the existence of an IPN. The TiVA data was used for Mexico to evaluate the effect of NAFTA, while in other cases where the TiVA data for a country was not available, the value addition was calculated using the formula prescribed under RTAs, between the related raw materials and finished export products by using the built down method.

5. Mexico in NAFTA – case of textiles

Since the RoO of NAFTA is stated to be one of the most stringent (especially in the apparel segment), the case of Mexico is studied here to explore whether the RoO established a regional value chain between Mexico and USA under NAFTA. Article 401 of NAFTA and its Annex contain the defining set of origin specifications. Article 401 of NAFTA states that goods can be deemed to have origin in 4 ways:

(i) Goods wholly obtained or produced in the NAFTA region;

(ii) Goods produced in the NAFTA region wholly from originating materials;

(iii) Goods meeting the Annex 401 origin rules; and

(iv) Unassembled goods and goods classified with their parts which do not meet Annex 401 rules of origin but that contain 60 percent regional value content using the transaction method, or 50 percent regional value using the net cost method.[17]

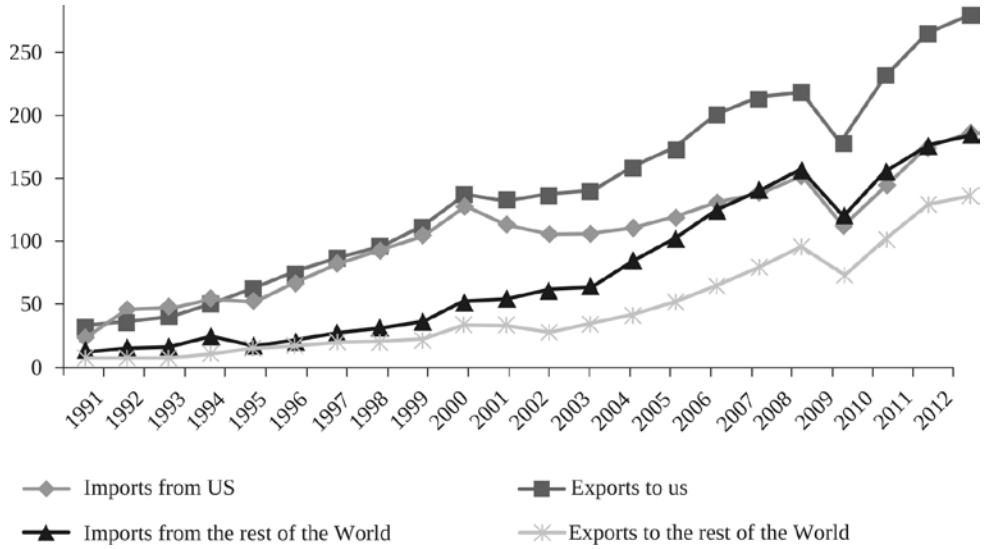
NAFTA rules of origin for apparel and other made up articles (Chapters 61-63 of the Harmonised System of Nomenclature) are more stringent than other products. The RoO prescribes that the 'yarn forward' rule is to be followed on non-originating inputs for the items of Chapters 61-63 to be considered as originating. At the same time, goods produced in any or all of the three NAFTA countries, with components and materials that are wholly sourced or manufactured in any of the three countries, qualify as originating goods entitled to preferential tariff treatment.

Prior to NAFTA, Mexico could export apparel to USA through the outward processing trade (OPT) mechanism, in which Mexican suppliers only did assembling work on the components imported from USA. NAFTA changed the processing activities in Mexico as all the activities relating to manufacturing (not merely sewing) were now allowed in Mexico. Mexico was able to consolidate its regional clusters of textiles and clothing expertise by moving beyond sewing and

17 "Guide to the Treatment of Textiles, Textile Articles, and Apparel under NAFTA", Canada Revenue Agency (formerly Canada Customs and Revenue Agency), 2001, http://cscb.ca/node/88006.

created backward-forward linkages with USA as well as within the domestic industries. Thus in the case of textiles and clothing Mexican manufacturers sourced their inputs from USA in order to meet the regional content requirement, creating an effective production network between Mexico and USA for successful utilisation of the NAFTA. The overall trade scenario between Mexico and USA indicates a higher degree of Mexico's reliance on USA – both in terms of exports and imports since 1991 (pre NAFTA) than the Rest of World ("RoW") as can be seen from the figure below (Figure 1).

FIGURE 1: MEXICO'S TRADE WITH USA AND [ROW]



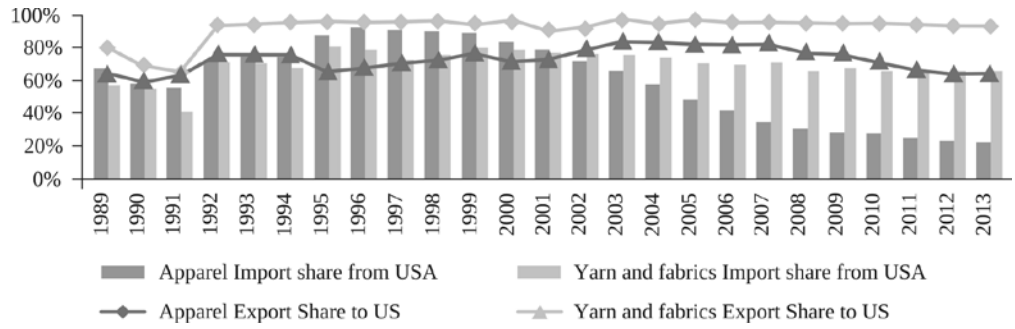
(Source: Author's calculation using WITS database)

From 1991 to 2000 the exports and imports with USA have followed the same trends. After 2000, Mexico saw a rise in favourable balance of trade with USA, though the same situation was not true with the RoW. This illustrates the possibility of the use of imports from RoW for further processing in Mexico and either using the products for domestic consumption or for export to USA, thus explaining the possibility of developing an IPN between RoW, Mexico and USA. In fact by creating a backward-forward linkage between its domestic industries and the industries in USA, Mexico was able to move up in the value chain by manufacturing clothing which developed beyond sewing.

How Mexico integrated with USA can be seen from the figure below (Figure 2). Increase in Mexico's export share to USA post NAFTA regime is apparent, which is consistently above 90% of Mexico's total exports of apparel to the world. It is also observed that over the years, the share of imports of fiber, yarn and fabrics from USA increased and the imports of apparel from USA declined. To a certain extent Mexico also saw an increase in its exports share of yarn and fabrics to USA. It is clear from the figure below that Mexico has integrated well with the USA at least in the garment sector through a supply chain of imports of yarn and fabrics from USA to process and produce apparel and exports to USA. Since 2007, the gap between the imports share of yarn and

fabrics from USA and the exports to USA has declined but the share of its exports of apparel to USA remained at the same level. This also establishes formation of a high degree of supply chain in Mexico by using the inputs from RoW and thus shifting from the regional value chain to the global chain in textiles sector.

FIGURE 2: MEXICO'S SHARE OF EXPORT AND IMPORT WITH USA



(Source: Author's calculation using WITS database)

A country enters the value chains both as a recipient of foreign inputs for the items it exports as well as a supplier of intermediate products that act as inputs in third countries' exports to which it has supplied. How Mexico has performed in terms of the magnitude of involvement of countries in the value chain through the production process (i.e. to have both forward and backward linkages) can be explained by the Participating Index developed by TiVA (OECD and WTO database). The index is expressed as a percentage of gross exports and indicates the share of foreign inputs (backward participation) and domestically produced inputs used in third countries' exports (forward participation). The higher the foreign value-added embodied in gross exports and the higher the value of inputs exported to third countries and used in their exports, the higher is the participation of a given country in the value chain. The index is expressed as percentage of gross exports and hence the value range is 0-100. It is evident that the backward and forward participation index of Mexico has seen an increase since 1995 (Table 1).

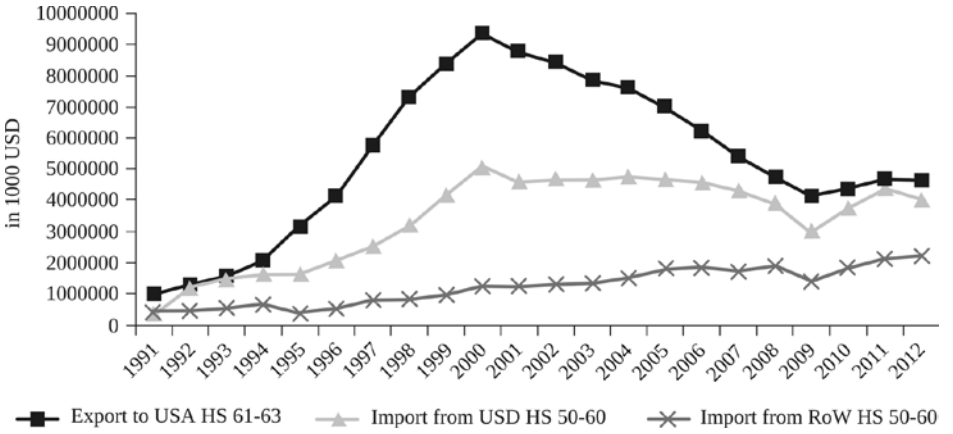
TABLE 1: PARTICIPATION IN GVC BY MEXICO: YEAR-WISE PARTICIPATION INDEX (%)

Participation Index	1995	2000	2005	2009
Total	36.9	**41.2**	**40.7**	**41.8**
Forward	10.3	9.3	10.0	11.5
Backward	26.5	31.8	30.6	30.3

(Source: T-IVA WTO OECD database)

The correlation between imports of raw materials and exports of finished goods (apparel) in case of Mexico can be illustrated in Figure 3 below.

FIGURE 3: MEXICO: EXPORT AND IMPORT OF TEXTILE SECTOR



(Source: Author's calculation using WITS database)

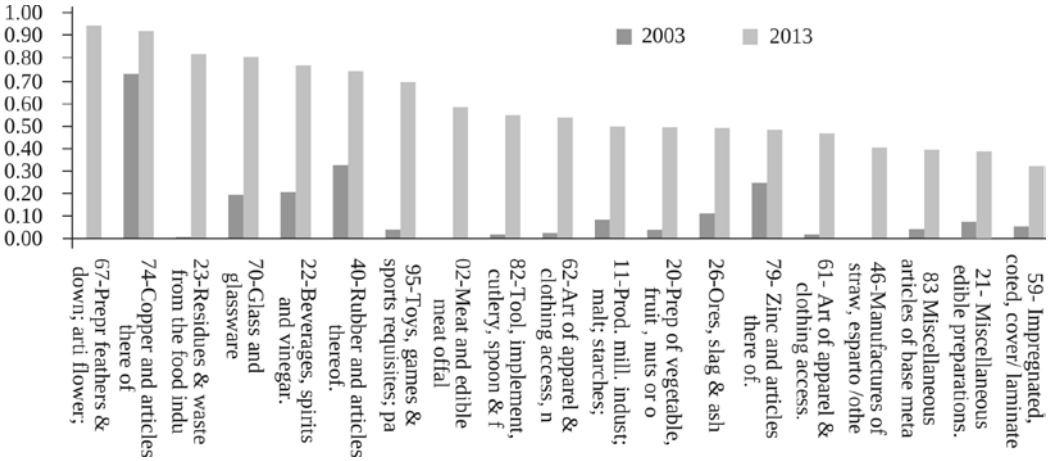
It is clear that Mexico has used sourcing of raw materials from USA and RoW for exports of apparel to USA, thus becoming a part of regional and global value chain, despite having a more stringent RoO of triple transformation process.

6. India-Sri Lanka FTA

The case study of India-Sri Lanka FTA ("ISLFTA") is also similar to Mexico as the qualifying criteria for origin is simultaneous application of CTH and 35% local value added content. Despite being a conventional FTA covering goods, it successfully integrated Sri Lanka with India not only in terms of goods trade but also increased investment flows leading to the integration of industries (see Box 3). Starting from March 2000, India granted duty-free treatment to Sri Lanka's exports from 2003. Unlike NAFTA, the ISLFTA has the general rule, which applies to all sectors, and hence a cross-sectoral analysis was done in this case. To understand the trade in different sectors, the IIT index was calculated using the Grubel-Lloyd method, with the index ranging between 0 and 1. The value indicates the extent of bilateral trade on similar products. A higher IIT indicated an existence of IPN. The post FTA shift in IIT and investments has been examined here.

Over the years, the intra-industry trade between Sri Lanka and India increased almost in all the sectors (Figure 4), indicating a higher level of backward-forward linkages among these sectors. It would be observed that there are several sectors where there was no IIT and over the years a very high IIT has been achieved.

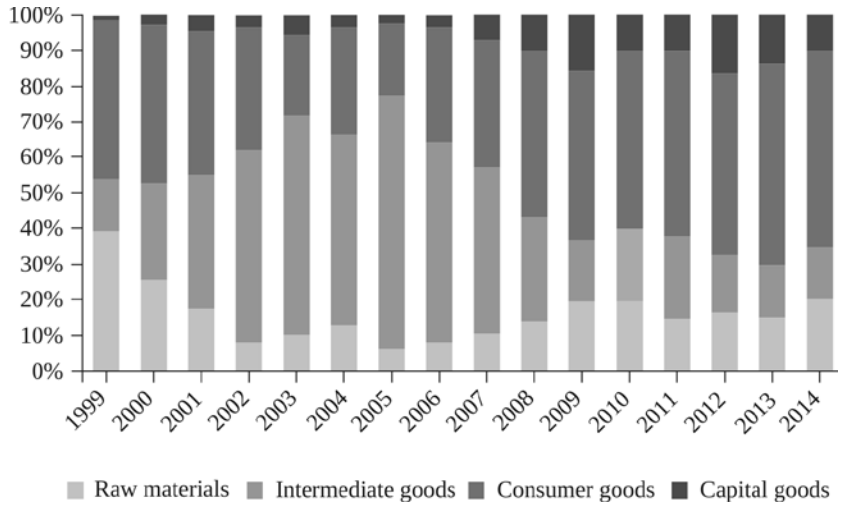
FIGURE 4: INTRA INDUSTRY TRADE BETWEEN SRI LANKA AND INDIA



(Source: Author's calculation using WITS database)

An analysis of composition of various categories of products (based on WITS classification) which were exported by Sri Lanka to India over the years is illustrated in Figure 5 below.

FIGURE 5: SRI LANKA'S EXPORTS TO INDIA



It is evident that starting from high composition of raw materials and intermediate products, in due time, Sri Lanka's highest composition of export products belonged to consumer goods and capital goods. Over the years, the dependence on export of raw materials and intermediate products has declined (around 35% of total exports in 2014). Thus the FTA allowed Sri Lanka to become part of bilateral value chain and allowed it to move up on the value chain over the years, despite having one of the stringent RoO. The above outcome is also substantiated by the figures and facts below

which states how the India-Sri Lanka FTA helped Sri Lanka attract investments from India and created an opportunity for integration of industries in select sectors:

BOX 3 : THE INDO-LANKA FREE TRADE AGREEMENT AND FDI

The free trade agreement gives duty-free market access to India and Sri Lanka on a preferential basis. In covering 4,000 products, it was foreseen that there would be a gradual reduction of import tariffs over three years for India and eight years for Sri Lanka.

To qualify for duty concessions in either country, the rules of origin criteria spelled out value added at a minimum of 35 per cent for eligible imports. For raw materials sourced from either country, the value-added component would be 25 per cent.

The effect of these changes led to an increase of Sri Lankan exports to India from US$71 million in 2001 to $168 million in 2002. India's exports to Sri Lanka increased from $604 million in 2001 to $831 million in 2002. Although the agreement does not address investment, it has stimulated new FDI for rubber-based products, ceramics, electrical and electronic items, wood-based products, agricultural commodities and consumer durables. Because of the agreement, 37 projects are now in operation, with a total investment of $145 million.

(Source: UNCTAD, 2003, World Investment Report)[18]

During January-June 2015, Indian investment amounted to US$ 33.05 million out of a total investment of US$ 515.09 million in the country. In 2014, Indian investment amounted to US$ 51.8 million out of total investments of US$ 1616 million in the country. India emerged as the eighth largest overall investor in Sri Lanka with investments of US$ 50.52 million in 2013. The main investments from India are in the areas of petroleum retail, hospitals, telecom, real estate, telecommunication, hospitality & tourism, banking and financial services, IT and food processing (tea & fruit juices). The notable Indian investments committed in 2014 are as follows: (i) ITC Ltd., hotel project (US$ 300 million) and (ii) Tata Housing project for real estate development (US$ 400 million).[19]

Due to Indian investments to Sri Lanka, mostly in the labour intensive sectors of vegetable oil & fat, metals, ferrous metals, oilseeds, wood products and machinery equipment, greater opportunities for employment were available to the local people. However, the possibility that these employment opportunities arise at semi-skilled or unskilled level cannot be ruled out. The impact of FTA on employment was studied by De Mel (2009) who estimated that as of the end of 2007, some 6747 individuals received employment as a result of Indian investment in 70 projects.[20] On the other hand, Kelegama and Karunaratne (2013) observed that within the first two years of the implementation of the ISLFTA, several sectors experienced over 100% growth, including industries such as chemical product manufacturing, cement manufacturing, and pearl harvesting. Quoting that there is no valid data on employment, they stated that some 5,900 jobs were created as a result of Indian investment projects and in few cases these related to relocation of labour from one company to another. The FTA has not only facilitated the investment

18 United Nations Conference on Trade and Development, *World Investment Report (2003)*.

19 Government of India, High Commission of India, *Sri Lanka, India-Sri Lanka Economic and Trade Engagement*, http://www.hcicolombo.org/pdf/Trade_Economic_Engagement_2112015.pdf.

20 Deshal De Mel, "Indo-Lanka Trade Agreements: Performance and Prospects," *Economic Review* 35, Nos. 5 & 6 (August & September 2009): 23-28.

in manufacturing sector, but also in services sector like telecom which provides greater opportunity for employment with a greater opportunity for software engineers and other high waged employment.[21] This was also recognized by the President of Indo-Lanka Chamber of Commerce and Industry[22] who stated that a win-win for both the nations has been achieved on the investment front due to the FTA.

Over the last few years one has also witnessed an increasing trend of Sri Lankan investments into India. Significant examples include Brandix (about US$ 1 billion to set up a Brandix India Apparel City spread over 1,000 acre land in Vishakapatnam), MAS holdings, John Keels, Hayleys, Aitken Spence (Hotels), Ceylon Biscuits (Munchee brand), Carsons Cumberbatch (Carlsberg) and DRH Logistics International; apart from other investments in the freight servicing and logistics sector.

7. Bangladesh: EU GSP benefits for RMG

Bangladesh is a GSP beneficiary for its exports of Ready Made Garments (RMG) to European Union (EU). The original GSP RoO for RMG prescribes that goods would be considered as originating if they were manufactured from Yarn (known as the 'yarn forward rule'). Therefore, for export of RMG under EU GSP, a country can import yarn and manufacture fabric and RMG locally for qualifying for GSP. In 2011, a change in the criteria for LDCs was made under the EU GSP. The new rule is based on a sector-by-sector approach and provided that if LDCs manufacture RMG from imported fabric (a single stage of transformation) it will be considered as originating and thus, preferences will be available under GSP. This was the case when the RoO criteria were relaxed for the LDCs. As per the changed RoO, Bangladesh can export by importing 'fabric' from anywhere and make garments – which will be eligible for GSP preferences. This was not the case earlier. In that case, one would presume that it would facilitate more exports of RMG from Bangladesh as well as generate more economic benefits. Bangladesh's top 4 items of export to EU are HS 6109 (T-shirts, singlets and other vests), HS 6110 (Jerseys, pullovers, cardigans, etc.), HS 6203 (Men's or boys' suits, ensembles, etc.) and HS 6204 (Women's or girls' suits, ensembles, etc.). From the perusal of exports of Bangladesh to EU, it appears as if Bangladesh benefitted by virtue of the increase in exports over the years. However, if one looks at the percentage share of Bangladesh's exports to EU vis-a-vis its exports to the world (this is done by using the mirror data, i.e., taking EU's imports from Bangladesh and world's imports from Bangladesh – as a proxy of Bangladesh exports, since the data of Bangladesh is not update) as well as overall imports of EU from Bangladesh, it will be evident that Bangladesh's share has been declining and this decline was noticed ever since the introduction of new RoO which became more relaxed in 2011. From 2009 to 2012, the shares of exports of Bangladesh to EU on HS 6109, 6110, 6203 and 6204 declined from 84% to 75%; 74% to 65%, 47% to 44% and 48% to 49% respectively. However, in order to be conclusive, one would need to examine data for some more years in this case.

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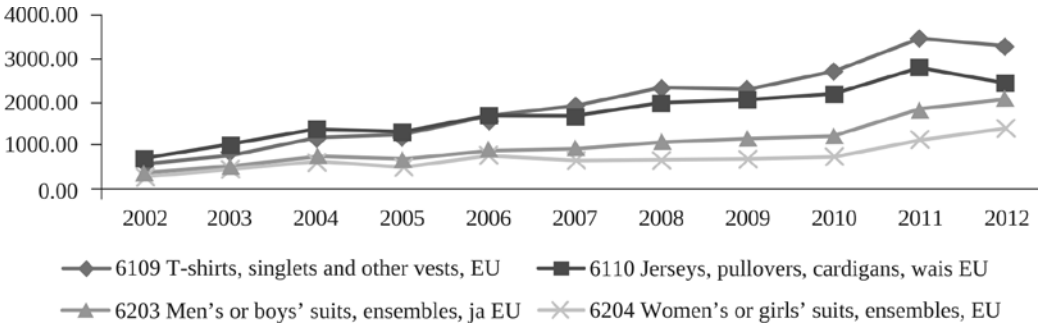
21 Saman Kelegama and Chandana Karunaratne, *Experiences of Sri Lanka in the Sri Lanka–India FTA and the Sri Lanka–Pakistan FTA*, UNCTAD Background Paper no. RVC-10 (Geneva: UNCTAD, 2013).

22 Press Trust of India, "FTA has benefited India, Sri Lanka: ILCCI", *The Economic Times*, July 30, 2013, http://articles.economictimes.indiatimes.com/2013-07-30/news/40895327_1_indo-lanka-free-trade-agreement-fta-sri-lanka.

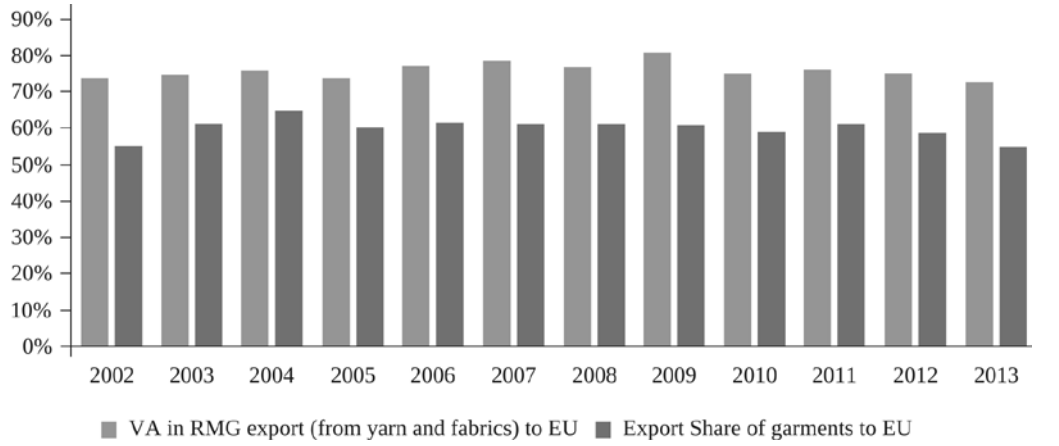
FIGURE 6: EU'S IMPORT OF TOP RMG ITEMS FROM BANGLADESH



(Source: Author's calculation using WITS database)

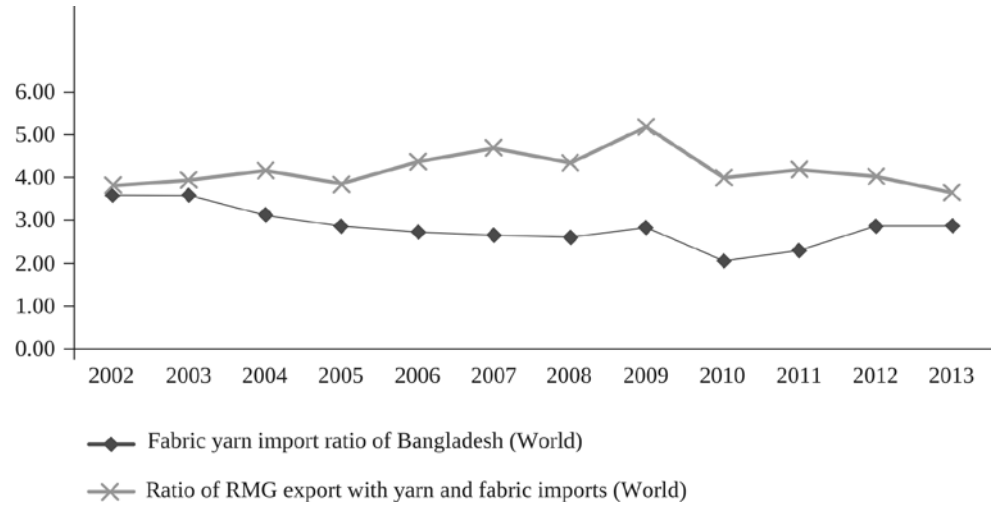
For the RMG sector, an analysis of value addition for RMG from combined yarn and fabrics imports was made. The calculation of value addition was done through a standard built down method. It would be seen from the figures (Figures 7 and 8) below that the value addition component in Bangladesh's export of RMG has declined after the introduction of new RoO.

FIGURE 7: BANGLADESH'S EXPORTS OF RMG TO EU



(Source: Author's calculation using WITS database)

FIGURE 8: EXPORT IMPORT RATION OF RMG, FABRIC AND YARN



(Source: Author's calculation using WITS database)

It would be observed that since the new RoO allowed imports of fabrics for manufacture of RMG, Bangladesh's exporters started importing more fabrics post 2011 than the yarn which was an earlier case. This is illustrated by an increasing import ratio of fabrics vis-à-vis yarn. In the process, the overall value added in Bangladesh has declined in this sector as the processing from yarn to fabrics and then RMG has been switching to fabrics to RMG. Therefore, it might be observed that a comparatively relaxed RoO has lessened the chances of Bangladesh to generate more economic activity in the country and perhaps decling the higher integration of domestic textiles inductry. One would need to exaine data for some more years to really examine if Bangladesh benefitted in this case in the long run or not, and thus, there is an ample possibilty of future research in this area.

8. Conclusion

Promoting regional value chains can be possible through the process of cumulation provisions. However, the provisions having the biggest impact need to be assessed. ESCAP (2013) suggests that an ideal situation for promoting regional value chain through establishment of IPNs would only emerge if the cumulation provisions provide a full cumulation scenario without any additional requirement. Secondly, it may also be important for the PTA blocks like ASEAN and SAARC to allow cumulation provisions like European Union's GSP; where the expert product loses its origin with regard to its 'nationality' by acquiring the origin of the 'PTA identity'. With ASEAN consolidating its PTAs with the trading partners, especially through RCEP, it would be important to consider having a product with an origin mark of 'Made in ASEAN' than the origin of individual ASEAN member. Having a provision of cumulation akin to the one in ASEAN (where there is no extra value added obligation on the exporting country) is likely to facilitate a better intra-regional

trade and integration of industries than the one in SAFTA, as the individual country obligation of 20% sometimes may be very difficult to achieve and even if a product has a regional content of more than 50%, it may not qualify for preferences.

Whether the RoO are in the form of meeting a local-content requirement as a proportion of value-added or change in the tariff heading or a particular processing requirement, all of them have the potential to create greater economic activities among the RTA members. The RoO have important implications for development of the manufacturing sector as a whole, which in turn contributes towards enhancing the export supply capabilities of the member country, and to greater economic activity and growth in the region. The case studies of NAFTA, ISLFTA and EU GSP establish the developmental role that the RoO can play through creation of value chains amongst the RTA partners. It may also need to be understood that if a value added is an RoO criteria, it would have greater potential to create regional value chains as it will promote generation of higher processing in the exporting country and will promote utilising the provisions of cumulation. On the other hand, if CTC is the only criteria for the RoO, a product will qualify even if it composes 100% non-originating raw materials. CTC, by its nature does not facilitate the regional cumulation and thus intra-regional trade. Thus, while the CTC may facilitate establishment of global value chain even with the RTA partners, the possibility of being part of regional value chain is much less. Much contrary to the belief that most stringent RoO act as a deterrent, it is true that they provide greater opportunities for the countries to integrate and become part of regional value chains.