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Are the WTO's Rules of Origin Turning Archaic as a Result of Trade in Value-Added?

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The birth of international trade policy has brought about with it manifold ramifications. The nuances of international trade are based on the economic policy of Adam Smith's comparative advantage, modified several times by Ricardo, Heckscher and Ohlin and Krugman to better suit the needs of the times. Nations almost always prefer to manufacture what they excel at producing and import what may be produced at cheaper rates in other nations. However, this uncomplicated concept of comparative advantage does not seem to be so uncomplicated anymore! Manufacture of a certain product no longer involves merely one importing and one exporting nation. Various nations add value to trade by providing intermediate processes, services or inputs requisite for the final product; value chains spread across the globe. These inputs may be used directly in the manufacture of goods, or may on the other hand need to be processed before they may be used. At the same time, inputs used in the manufacturing of goods are not limited to goods but also extend to services that are provided in manufacturing the final product, for instance, warehousing, housekeeping, transport, etc. Nations have therefore come to be so interdependent that the mercantilist view of beggar-thy-neighbour has been considered to be completely redundant, especially when a nation's imports include value added from within its own nation. Moreover, nations have even begun to question the effectiveness of antidumping duties, since the

same would be imposed on imports which the importing nation has itself added value to. Thus, albeit that value chains build upon the simple concept of comparative advantage, they have in turn compelled certain pressing questions to do with the manner in which trade policy is regulated, bringing about some imperative structural changes. When goods are manufactured with the aid of inputs provided by several nations, it no longer remains fair that the last country where the good has been assembled is considered the country of origin. Against this backdrop, in 2011 the then Director-General of the WTO Pascal Lamy mooted the concept that goods are now "made in the world". This article delves to gain a deeper insight into the concept of "made in the world" and how the working of global value chains has permitted nations across the globe to add value to trade and may in turn pose some significant implications for international trade policy. For most, it would require bringing into line various policies to arrive at a congruent approach to trade in value-added goods. International trade regulation must provide a sound response to the dynamics of the concept of "made in the world", *inter alia* through more thorough regulation and liberalization of the services, investment, customs and competition sectors, to name a few.

Keywords: comparative advantage, global value chains (GVCs), inputs, intermediates, made in the world, trade in value added, World Trade Organization

Introduction

The aftermath of the Second World War has been witness to an increase in international trade. This is particularly due to the fact that the traditional notion of "beggar-thy-neighbour"[1] was the primary reason behind the Great Depression in 1929, which in turn led to the Second World War. As a result, various theories began to be formulated by economists to better regulate trade related matters. As well, the theory of absolute advantage that was formulated by Adam Smith in his treatise The Wealth of the Nations in 1776[2] had been modified in the early 19th century by David Ricardo into the theory of comparative advantage, to better suit the needs of the times.[3]

International trade law, as regulated by the World Trade Organization,[4] is largely premised on the theory of comparative advantage. Nations find it economically cheaper to produce and export goods and/or services they excel at, and to import goods and/or services that would be economically cheaper and less time-consuming to import than to produce themselves. It is against this backdrop that the mercantilist approach of "beggar-thy-neighbour" would no longer prevail. Efforts of nations to curb imports and increase exports would do more harm than good. This is due to the fact that imports stand at an important place in the chain of production by which goods are manufactured of late. Nations have become increasingly interdependent and rely on each other to produce and export inputs that may further be used in production

of final products before they may be exported. In a related vein, international trade law has further reduced tariff and non-tariff barriers, thus increasing competitiveness. The nuances of international trade policy as regulated by the WTO appear to have become more multifaceted, involving more than just simply one importing country and one exporting country. In other words, various countries often contribute to the production of a single commodity. Hence, numerous countries are often involved in adding value to the production of a single commodity. This is because countries find it economical to not merely produce goods that involve cheap labour, but also at the same time import intermediates that can be produced at cheaper rates in another nation. Traditional notions of comparative advantage have been further discussed by Heckscher and Ohlin, who elaborate that differences in relative costs are often attributed to factor endowments. Therefore, capital intensive nations must specialize in capital intensive products, and labour intensive nations must at the same time prefer to produce labour intensive products (commonly referred to the H-O model).[5] In a related vein, Krugman emphasises that despite the fact that nations may not be different from one another in terms of some factor endowments, they may still prefer to import goods from countries that have a specialization and are therefore more efficient in producing certain products.[6] These notions of comparative advantage have led to the birth of global value networks across the world, with nations becoming increasingly interdependent. Considering that trade policy has led to such increasing interdependence among nations, a single nation can no longer be considered to be the sole producer of any commodity.

The growing patterns in international trade, whereby firms of a nation are often part of global value chains, have in turn compelled a transformation in the governance of international trade laws. Research also proves that the birth of global value networks, which allow various nations to add value to trade, has permitted reasonable growth.[7] In a related vein, global value chains (GVCs) have attracted attention for their close connection to the functioning and regulation of trade policy. It was in this context that a move to recognize the impact of GVCs on international trade policy began; it became important to recognize the manner in which GVCs now cause goods to be produced across different sectors in different countries. It became important for the WTO to scrutinize how the steady growth of GVCs has underpinned the need to initiate the concept "made in the world",[8] particularly because the existence of GVCs has become all-encompassing.

Against this backdrop, the aim of this article shall be to delve into the concept of "made in the world" and its implications for international trade law as regulated by the WTO. This will involve understanding the concepts of trade in value added and global

value chains, and how the two concepts may compel sea changes in the manner in which international trade policy is perceived and regulated.

The Naissance of a New Revolution: The "Made in the World" Initiative

The "Made in the World" initiative began in the year 2011, in recognition of changes in international trading patterns. In particular, international trade, which was once exclusively dominated by the developed nations, is now witness to active participation by the developing nations, especially after the birth of the GATT-WTO, which has significantly lowered tariff and non-tariff barriers. With the escalation in international trade, the nature of conflicts is bound to change. It was against this backdrop that the "Made in the World" initiative was launched in the WTO, spearheaded by the then Director-General Mr Pascal Lamy. The idea primarily relates to the fact that the large-scale participation of numerous countries indubitably calls for revisiting the current rules of origin[9] laid down by the WTO. According to the rules of origin, the country where the good was last assembled should be regarded as the country where the said good is manufactured; this now appears to provide a completely distorted image about the origin of the said product. Recognition of this distortion in turn necessitates the need to measure the "value added" by every nation involved in the production of a certain good, whether by means of providing a raw material or by means of providing services necessary to the production of the good.

How Do Nations Add Value to Trade?

There are manifold aspects to the Ricardian theory of comparative advantage. Inputs required in the production of a commodity may either be procured as a result of out-sourcing or off-shoring. Inputs procured using the former method involve the services of another domestic supplier. In other words, the inputs or intermediates are purely domestic in nature. Off-shoring on the other hand involves the procurement of intermediates from a foreign country. This, in turn, involves vertical trade. Put simply, vertical trade occurs only when a country exports intermediates to another country. The second country then produces a final product using the said intermediate and then exports the final product to a third country.[10] [11]

As mentioned earlier, trade no longer takes place between merely two nations, i.e., the importing and the exporting nation. Put otherwise, numerous nations are involved in the production of a single good. This means that firms and undertakings from various nations add value to trade. Hence, firms from a particular nation may contribute by providing raw materials (also known as intermediates), to the production of a good in another country. Such contribution may take place in two ways. The first

is when firms from one nation export goods that require further processing by firms in another country and are then exported to a third country for the production of a certain commodity. Such a method of production is commonly known as the "downstream method". In other words, a country's inputs are used as foreign value added in order to be exported into a third country. Second, a country may participate in the production of a good by providing a direct input in the production of a certain good. Such a method is referred to as an "upstream method" of production. In other words, the traditional methods of production of a good in a single country have been replaced by the birth of global value chains, which involve industries across multiple nations.

By and large, this pattern of preferring to produce goods with the involvement of various sectors has been influenced by the introduction of modern methods of transportation. Hillberry attributes the sudden rise in global value networks to the increasing importance of air transport as compared to traditional methods of shipping for international trade. Also, he states that certain countries have been strong drivers of these chains. For instance, when the former communist countries opened to international trade, the distinctiveness of such countries possessing low wages and high skills played a role in their becoming party to these networks.[12]

The Establishment of Global Value Chains as a Means to Add Value to Trade, and the Ensuing Implications

International trade has witnessed a paradigm shift from the conventional method of facilitating trade merely in goods. The establishment of global value chains has additionally made it easier for firms to source services offshore, a phenomenon referred to by Grossman and Rossi-Hansberg as "trade in tasks".[13]

A global value chain (GVC) has been succinctly defined by the GVC Initiative at Duke University as encompassing

> … the full range of activities undertaken to bring a product or service from its conception to its end use and how these activities are distributed over geographic space and across international borders.[14]

The existence of GVCs has compelled an inquiry into the manner by which trade may be measured. An often cited example illustrating the urgency of the matter would be that of the Apple iPhone, with studies proving that despite the fact that the iPhone is considered to be "made in China", and therefore counted as a Chinese export, in reality the actual Chinese contribution may be miniscule. This is because various suppliers and industries across the globe contribute by providing components necessary to the production of a single iPhone.[15] The "made in China" iPhone may not be as Chinese as it seems. In addition, the age-old fascination for Swiss watches may

be watered down by the knowledge that Swiss watches may not be all that Swiss after all!

Against this backdrop, the WTO has been prompted to inquire into the method by which the impact of GVCs on international trade policy may be assessed. This is peculiarly due to the fact that several implications have arisen with the growth of GVCs and the consequent significance, amongst members of the international community, of trade in value added. It becomes extremely complicated to assess the real contributions by nations, the reason being that a product is made up of value added by various sectors across the globe. This value added may be in the form of either providing intermediates or providing services that go into the production of the commodity (e.g., warehousing, housekeeping, telecommunications, etc.).

Another significant aspect is that intermediates almost always land up being counted multiple times when they cross the border. This is especially so when intermediates require being exported for further processing by an intermediary in another country. At such times, the intermediate would be counted only once as a contribution to a country's GDP, but several times for customs evaluations, etc.

Another facet is when trade takes place in a circular manner. That is to say, goods may be exported for further processing and later re-imported so that they may be added as intermediates in a final product. In such situations, it becomes imperative to calculate the domestic value added vis-à-vis the foreign value added.

In addition, the current method of calculation distorts the current bilateral relations between nations. As trade in value added increases, it becomes vital to take into account the role of third countries when one looks at bilateral trade relations. The existing method of determining trade relations on the basis of bilateral trade should be replaced by a method which takes into account third countries in the value chain, as opposed to looking at merely the exporting and the importing nation. For instance, where country 'A' has provided inputs to be used as intermediates by country 'B' in products later exported to country 'C', the current method would take into account only the relations between country 'B' and country 'C', notwithstanding the role played by country 'A' in the production process. The above mentioned conditions leave one to conclude that the current policy requires a revisit, and new policy initiatives must be developed to measure trade in value added, so as to calculate the participation of other countries in the production chain. Having a correct analysis of trade in value added would enable policy makers to understand the level at which a nation's inputs have been integrated in the international production of other goods.[16]

A considerable portion of literature also throws light on the manner in which GVCs have radically influenced the financial crisis ever since their inception. Cheung

and Guichard have thrown light on the fact that GVCs have contributed to the existing damage associated with the financial crisis. This is primarily due to the fact that the functioning of GVCs is such that production is fragmented or more finely sliced across the globe. When nations are more interdependent in such circumstances, a "blow" to the economy in one nation is bound to spread across the production chain. This would impact not only the production of goods but also the extent to which they are imported by nations.[17]

On a similar note, GVCs are so intertwined in nature that a trade policy in one nation is bound to affect the relevant sectors of other nations within the production line. Korinek and Kim elucidate this point by referring to export taxes and quotas in international trade, which may significantly impact the working of GVCs. They elaborate that such restrictions affect not merely exportation of the products but also all the related sectors in the production line.[18]

A study undertaken by the National Board of Trade, Stockholm, has taken note of an interesting complexity that has arisen with the mushrooming of GVCs. The study underscores the intricacies that appear as a result of these value chains. The analysis revolves around five case studies from the European shoe industry and the consequent impact of antidumping measures on the shoe industry. The study is interesting because it brings to light some crucial questions with regard to the convolutions in trade in value added and its impact on antidumping. Against this backdrop, it illustrates that even in cases pertaining to the shoe industry, where completely finished shoes have been imported for sale in the European Union (where no intermediate has been supplied by the EU), the EU would nevertheless be contributing to trade in value added by providing transportation and freight services. Therefore, some amount of domestic value added would still be there. In such circumstances, when antidumping investigations are initiated, the same would additionally impact the EU economy due to the fact that the EU has added value even in the case of goods that have been imported in completely finished form, thereby giving rise to an unusual tug-of-war between antidumping investigations and GVCs.[19] In other words, the growth of GVCs has given rise to outlandish tribulations of value added from nations being subject to their own antidumping investigations.

In a similar vein, Vandenbussche and Viegelahn point out that antidumping investigations have resulted in harm to a nation's own domestic producers, in a world dominated by GVCs. They refer to the Indian scenario wherein firms discontinue the use of intermediates which have been subject to antidumping investigations. As a consequence, even the domestic producers producing the intermediates are harmed by such investigations.[20]

Global Value Chains and the "Made in the World" Initiative

Understanding that the world has come to be dominated by GVCs, it has become vital for policy makers to undertake a comprehensive scrutiny of trade policy, thereby developing innovative approaches in measuring trade in value added. Apart from conferences held by the WTO, OECD and the World Bank for a deeper insight into the working of GVCs and their implications for trade policy, the WTO and the OECD have also collaborated to form a database in the form of input-output tables to measure the contribution, or in other words the value added, by each country in the manufacture of a final product. The input-output tables form the crux of the WTO's "Made in the World" initiative and are modelled on the Asian input-output tables (IDE-JETRO)[21] and the World Input Output Database Project.[22] These input-output tables would assess all the countries that have provided services or inputs used as intermediates, or processed inputs, as well as the nation which has finally assembled and exported the product. In addition, the importing nation(s) would also form part of the database, as opposed to the traditional method wherein merely the country which finally assembled the product was recorded.[23]

The Significance of the "Made in the World" Initiative for International Trade Policy

The current debate on the concept of "made in the world" has assumed relevance for several reasons. Needless to say, the traditional method of regarding a single country as the manufacturer is out of date with the rise in GVCs. As well, apart from the reasons mentioned above, measuring trade in value added has various other implications for international trade policy.

Failure to recognize value added across a GVC produces a completely distorted image about the country of origin and also misrepresents the "political debate". It is extremely significant to note and take into account that intermediates that are involved in the production of a single commodity make up approximately 60 to 70 percent of trade.[24] In such circumstances, it becomes certainly wrong to deem the last country in the line of assembly of a single product to be the maker of such a good. At the same time, calculating the correct amount of value added in a given commodity also assumes that every nation involved in production is capable of assessing the amount of its domestically produced inputs which have been incorporated as intermediates in the production of another product.

Studies have shown that certain industries such as those producing automobiles, furniture, electronics, etc. would be the industries which are highly integrated in GVCs, the reason being that such industries are obviously more dependent on inputs

which may be procured at cheaper rates from other nations. Hence, such industries are more "finely sliced". On the other hand, certain industries may be more "down stream" in nature. In other words, industries such as service industries do not produce products that can be used as direct inputs in another country; but they are useful in the production of other goods.[25] At the same time, certain sectors add greater value to the final production of a good. That is to say, certain sectors are obviously the beginning point in the chain. Thus, they do not require or depend upon inputs that must be imported from other nations. The services[26] and the transportation sectors are common examples of such a scenario. Nations excelling in such sectors would consequently acquire greater value.

It becomes imperative for nations to assess the manner and extent to which goods or services generated from their territory have been incorporated in the production of another product. Doing so would assist nations to modify their policy objectives so as to allow them to concentrate on goods and services they excel at and also the sectors in which jobs are created. The increasing importance of trade in value added is also relevant for policy-makers of any given country in formulating investment regulations and in identifying the sectors in which investment would prove more fruitful. Likewise, it is also imperative for nations to access the right sectors and hence analyse the sectors which may have a comparative advantage over them, so as to reduce final costs. This in turn would improve growth and competitiveness. Prices of a commodity may further be reduced when, apart from importing intermediates from nations which have a comparative advantage, goods can be imported from nations from where the cheapest intermediate may be obtained. This would simultaneously reduce the final price of the product. Hence, identifying the correct sectors becomes important so as to understand the level at which they have been incorporated in the global chains.

The concept of "made in the world" has assumed relevance for a plethora of additional reasons, most importantly because it throws light on trade in value added. This becomes crucial for developing countries, which need to undertake a heightened scrutiny of the sectors which have been contributing the most to development. In other words, they need to know the contribution their exports are making to trade in value added. Increasing participation by developing countries in value added trade will in turn increase the given nations' GDPs, as such nations would now have a greater chance to participate in GVCs. In other words, identification of the shares of each nation in the production of a certain commodity makes it easier for policy-makers to determine the correct initiatives required for increasing the GDP. This is primarily because the precise participation rate and the sectors in which they possess a

comparative advantage over others become known. Consequently, the contribution such nations make to trade in value added is bound to increase.

In a similar vein, with the use of input-output tables and the "made in the world" initiative, a nation's current account deficit can be reduced considerably, thereby serving the purposes of international trade policy. A deficit in the current account occurs when a country imports more than it is able to export. With the use of input-output tables, a country would be able to keep track of its exact participation rate. In other words, the participation of a country in the making of a final product becomes known. Hence, even when a country is considered to be importing more than it exports, the same conclusion might not be reached if input-output tables were used, due to the fact that even the imports include some amount of value added by the importing nation. A common illustration of this phenomenon would be the rising trade deficit of the United States. The United States, being a developed nation, possesses strong trade ties with nations such as Canada, Mexico and China. Nevertheless, the United States was recently reported to have trade deficits with those countries of $22 billion, $48 billion and $315 billion respectively, meaning simply that the United States imported more from those countries than it exported. With goods being accounted for as "made in the world" and with calculation of nations' contributions of intermediates that go into final manufacturing, the trade deficits of nations can be reduced dramatically. This is because, as mentioned above, even when goods are being imported, they often still include some amount of value added from the importing nation; such value added can only be traced with the aid of input-output tables.[27]

Currently, developed countries export the greater value of commodities, thereby making a greater contribution to their respective GDPs. This is due to the fact that in such nations various sectors within the value chains exist within the territorial limits of the nation itself. Hence, such nations are bound to depend less on imported intermediates for the final product. In such circumstances, the domestic value added of the product becomes larger, thus adding to the nation's GDP. This also becomes an important factor for developing countries striving for economic growth, which require sound models for development. It is here that the concept of "made in the world" is imperative because it underpins the significance of trade in value added. In other words, the sectors that are performing well become known. Policy initiatives in sectors that require drastic transformations also come to the forefront. At present, developing countries have shown a tendency to depend on imported inputs, especially when it comes to products that are finally exported. Hence, the domestic value added is relatively low, and the contribution such goods make to the GDP is low as well.

The concept of "made in the world" would have several other implications for the current functioning of the WTO. Understanding that the rise in GVCs has underscored the requirement to revisit the rules of origin as they exist at present, the most significant corollary would be that input-output tables would be able to effectively account for the inputs as they cross boundaries, so as to prevent double-counting. As mentioned in the preceding paragraphs, the existing mechanism involves a lot of double counting, which consequently raises the prices of the end product.

International trade regulation must also provide a sound answer to the dynamics of the concept of "made in the world". In other words, regulations must so be made and modified as to work in tandem with the mushrooming of GVCs. For most, given the fact that GVCs begin with the off-shoring of services, due to the fact that services lie at the very base of these value chains, the current regulations on international trade in services must provide sufficient answers to the inadequacies which may exist in the services market. For this, it is in turn vital that nations complement the efforts of international trade regulators with efficient policies to regulate trade in the service sector.[28] Deardoff justifies the same by stating that if trade in services were improved and liberalized, the rate at which countries may participate in GVCs would increase proportionately. This can be achieved by harmonizing standards that regulate services so as to reduce friction among nations in the cross-border provision of services.[29] In a related vein, Reisman and Vu underline the imperativeness of services in the distribution sector. They identify that services in this sector act as a key link to various other sectors. Therefore it becomes vital to regulate trade in services if the fruits of GVCs are to be realized.[30]

In a related vein, similar gains would accrue by increasing openness in the investment sector. This would be achieved by liberalizing policies that regulate foreign direct investment. Having a liberal investment policy would permit and increase competition on the market by increasing dynamic and static gains. While dynamic gains accrue when firms in the value chain begin to improvise existing technology and invest in modern equipment so as to survive robust competition, static gains would automatically benefit from GVCs, as tasks would now be divided, therefore permitting distribution of income. Against this backdrop, liberalization of the investment sector and a robust competition policy seem to be indubitably intertwined. In other words, reforming competition policy to accommodate the changes brought about by value chains becomes a must, because firms are in a better position to engage in anticompetitive pricing and thereby reduce output and increase the prices of not merely the final commodity, but also of the inputs.

Another key implication of treating goods as being "made in the world" would be the reformation of domestic regulations that limit the functioning of GVCs. That is to say, when goods and services cross borders several times in the making of a final product, it becomes imperative that regulations behind the border facilitate the easy movement of both goods and services. Hence, it becomes important that, apart from liberalizing the investment sector, administrative procedures are thoroughly regulated. When countries hope to develop increased access to GVCs, it becomes vital that measures that facilitate the same are improved to better suit the needs of the time. At present, as inputs cross borders numerous times, whether for processing or to be added as an intermediate, they are counted several times for the purpose of customs evaluation, thereby leading to an increase in prices. With goods being seen as "made in the world", an accurate picture of the importing and exporting nations both upwards and downwards would be available with the aid of the input-output tables. Consequently, an input would be counted only once, as opposed to the traditional method of being counted several times for customs evaluation, thereby reducing the cost of the final product. This would additionally require simplifying customs procedures, which can best be done by harmonizing regulations on the same.

In addition, acknowledging the fact that value chains involve the contributions of various sectors would provide a considerable impetus to small and medium sized enterprises (SMEs). Because the nature of GVCs is such that sectors are so intertwined, it becomes easier for SMEs to be absorbed in these value chains.

Moreover, Kimura and Obashi illustrate that acknowledgment of the "made in the world" concept would further the goals of multilateralization. They draw attention to the fact that when sectors are so interdependant it becomes imperative that all the sectors, both upstream and downstream, are liberalized to realize the true goals of trade policy. In a related vein, they refer to the approach of the WTO's Information Technology Agreement,[31] which has liberalized trade in the IT sector by removing tariffs for a majority of products in the value chain.[32] Against this backdrop, the "Made in the World" initiative would only strengthen the efforts of the multilateral trading system in meeting its goals: that is, to truly liberalize trade and reduce tariffs and eliminate non-tariff barriers.

Concluding Remarks

The "Made in the World" initiative has assumed significance for a plethora of reasons. Knowing that various nations are adding value to the manufacture of a certain commodity, it becomes important for nations to reconsider protectionist policies that they may at present resort to. When nations tend to curb imports on account of

tribulations in balance-of-payments, or when they impose antidumping duties on another state, such actions would almost always boomerang on their own economy. With nations becoming so interdependent on one another, it has become imperative for the international trading system, as regulated by the WTO, to transform the rules of origin as they exist in their current form to accommodate the changes brought about by the momentous rise in GVCs. This would be beneficial not merely for the regulation of international trade, but would at the same time also benefit individual nation states for the reason that the "Made in the World" initiative would help these nations to identify the sectors where they excel and reform policies for those sectors for which reform may be required. Consequently, giving due recognition to the importance of trade in value added would in turn provide a sound answer to the dynamics of international trade regulation by means of more thorough regulation and liberalization of related and integrated sectors.

Endnotes

1. The concept refers to the situation where one nation tends to curb imports and increase its exports, thereby affecting the economy of other nations. The phrase was coined by E.A. Gower during the period of the Great Depression in the 1930s. See, E.A. Gower, Beggar-My-Neighbour: The Reply to Rate Economic Ramp. Rothermund, Dietmar *The Global impact of the Great Depression 1929–1939*. Routledge. pp. 6–7; Deardorff, Alan V. (November 4, 1996). "An Economist's Overview of the World Trade Organization". *The Emerging WTO System and Perspectives from East Asia*. Joint U.S.-Korea Academic Studies **7**. Korea Economic Institute.
2. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (5th ed. 1904). In the doctrine of absolute advantage, Adam Smith promulgates the idea that every nation can benefit equally if it engages in the production of those goods for which it has an absolute advantage. In other words, Smith states that "[it] gives a value to their superfluities, by exchanging them for something else, which may satisfy a part of their wants, and increase their enjoyments. By means of it the narrowness of the home market does not hinder the division of labour in any particular branch of art or manufacture from being carried to the highest perfection. By opening a more extensive market for whatever part of the produce of their labour may exceed the home consumption, it encourages them to improve its productive powers, and to augment its annual produce to the utmost, and thereby to increase the real revenue and wealth of the society."
3. David Ricardo, *On the Principles of Political Economy and Taxation* (1st ed. 1817). Ricardo emphasises the point that it is due to the differences between countries that trade essentially begins. In other words, countries begin to trade in those goods and/or services in which they have a comparative advantage over others.
4. Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 4 (1999), 1867 U.N.T.S. 154, 33 I.L.M. 1144 (1994) [hereinafter Marrakesh Agreement or WTO Agreement]. The WTO was established by the Marrakesh agreement and consists of a Preamble, XVI Articles, Four Annexure and Declarations, Decisions and Understanding. The agreements cover goods, services and intellectual property; with underlying principles of liberalization, commitments to lower customs tariffs and other trade barriers, also containing certain permitted exceptions.
5. For a detailed discussion of the Heckscher-Ohlin trade model (H-O model), see Ronald W. Jones, Heckscher-Ohlin trade models for the new century, in *Bertil Ohlin: A Centennial Celebration,* (MIT Press, 2002); Ronald W. Jones, *Specific factors and Heckscher-Ohlin: An intertemporal blend* (University of Rochester,(Aug. 26, 2013), http://www.econ.rochester.edu/people/jones/Specific_Factors_and_Heckscher.pdf ; Ronald W. Jones, Factor proportions and the Heckscher–Ohlin theorem, 24 *Review of Economic Studies,* 1–10 (1956).

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7. T. Sturgeon and Olga Memedovic, *Measuring Global Value Chains: Intermediate Goods Trade and Structural Change in the World Economy*, (UNIDO Working Paper (to be numbered), 2001); David Hummels, Jun Ishii and Kei-Mu Yi, The Nature and Growth of Vertical Specialization in World Trade, *Journal of International Economics,* 54(1), 75-96 (2001); Kei-Mu Yi, Can Vertical Specialization Explain the Growth of World Trade? *Journal of Political Economy,* 111(1) 52-102 (2003).
8. http://www.org/english/res_e/statis_e/miwi_e/miwi_e.htm
9. Agreement on Rules of Origin, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 17 (1999), 1868 U.N.T.S. 397, 33 I.L.M. 1143 (1994) [hereinafter RoO 1994].
10. See Pol Antras and Elhanan Helpman, Global Sourcing, *Journal of Political Economy,* 112 (3), 552-580 (2004); David Hummels, Jun Ishii and Kei-Mu Yi, The Nature And Growth Of Vertical Specialization in World Trade, *Journal of International Economy,* 54(1), 75-96 (2001); and R. Jones and H. Kierzkowski, A Framework for Fragmentation, in *Fragmentation: New Production Patterns in the World Economy*, 17-34 (S. Arndt and H. Kierzkowski eds., 2001) for a detailed discussion on vertical specialization in trade flows.
11. For a detailed discussion on off-shoring, see Gene M .Grossman and E. Rossi-Hansberg, (2006), The Rise of Offshoring: It's Not Wine for Cloth Anymore, paper presented at Kansas Fed's Jackson Hole conference for Central Bankers ON "The New Economic Geography: Effects and Policy Implications," Jackson Hole, Wyoming, August 24-26, (Aug 26, 2013) http://www.kc.frb.org/
12. Russell H. Hillberry, *Causes of International Production Fragmentation: Some Evidence* (October 12, 2011)., http://ssrn.com/abstract=2179650 or http://dx.doi.org/10.2139/ssrn.2179650 (last updated Aug 26, 2013).
13. Grossman & Hansberg, *supra* note 11.
14. Global Value Chains Initiative, Duke University, www.globalvaluechains.org/ (last updated July 31, 2013).
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India exported services worth $110 billion out of the world's $3,665 billion and imported commercial services worth $177 billion, thereby ranking tenth and seventh in terms of its export and import performance respectively. However, in the event that intra-EU trade is excluded, India ranked sixth and fifth respectively for export and import performance. World Trade 2010, Prospects For 2011, Press Release, PRESS/628 ,7 April 2011 (11-1714), p 23.

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