



## The Role of Value Added in the Assessment of National Trade Performances

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**Abstract** *The enhancement of global value chains has major advantages, such as: the growth of investment and jobs, the new trade opportunities and keeping away from exclusion, the increase of efficiency of trade or the improvement the position of some developed countries. But, the assigning the entire commercial value to the final country of processing can distort the origin of the products and lead to wrong decisions. This paper examines the international cooperation for identifying the key features of global value chains, and the role of statistics in resolving the problems generated by global value chains.*

**Key words:**

Global value chains, made in the world, international trade, value added, WTO

**JEL Codes:**

F13, F23

### 1. Introduction

Nowadays, the world's production structure has become increasingly fragmented. Companies split their operations all over in the world, from the design of the product and manufacturing of components to assembly and marketing, creating international production chains. The production has been divided into different tasks and spread across the globe. Affiliates and independent subcontractors process and refine products, turning them into finished consumer products in long complicated supply chains. This has led to trade with input goods (raw materials, semi-finished goods, components etc.) and input services (business services) becoming increasingly important. To greater extent, products are "Made in the World" rather than "Made in the China" or "Made in Germany".

As a consequence, a new concern is highlighted among consumers who want to find "Made in Switzerland" on a watch label.

The "Made in the World" initiative has been launched by the WTO in order to support the practical approaches and the processes of evaluating and analysing international trade in value added.

The statistical tendency of *assigning the entire commercial value to the final country of processing* can distort the origin of the products and lead to wrong decisions. The challenge is to identify the right statistical connections among the different statistical frameworks and national accounting systems to ensure that international interactions resulting from globalization are correctly reflected and to facilitate

cross border dialogue between national decision makers.

### 2. The advantages of global value chains

Global value chains have become the nervous system of the world economy. *Global value chains have some major advantages, such as:*

1. *Increase investment and jobs.*
  - a. Nowadays, even small, emerging countries can build up an industry that is able to concentrate on a specific segment of the car or electronics industries.
  - b. Countries provide those partial products that are advantageous for them from a cost perspective. Thus, global value chains often lead to direct investments which create jobs.
  - c. It creates opportunities as well as the efficient exchange of goods and services between different markets.
  - d. While only finished goods were being traded between countries, smaller and poorer countries were forced out of the market.
2. *New trade opportunities and keeping away from exclusion.* The WTO-supported initiative links agencies promoting international cooperation and donors with the goal of helping governments of developing countries overcome obstacles to contributing to international trade. Such countries include Bangladesh, Burkina Faso, Colombia, Cambodia, Vietnam, Honduras, Costa Rica and Haiti.

- a. In the same way, different organisations, such as Aid for Trade, are trying to build up the weakest members of the global supply chain.
  - b. In recent years, around USD 40 billion was spent on such programmes for developing countries. But those countries also had to commit to attracting investment and improving their competitiveness.
3. *More efficient trade* (especially for US and China). But there's an implicit challenge in building up the "made in the world" economic model. Its biggest supporters are those that have already integrated themselves into the global supply chain, such as Costa Rica, Chile, Mexico, China, Singapore, Malaysia, Japan, the US, Canada and most European states. The least interested are those that have not yet joined the supply chain.
- a. The US is clearly the most favoured country through the global value chains. This could be demonstrated by the fact that multinational companies like Apple know how to pull the largest profits out of this trade model.
  - b. Global value chains also help China's economic development, although in the face of increasing labour costs, it could now observe a shift to Asian countries with cheaper labour, such as Vietnam, Bangladesh and Indonesia. The development of global value chains is still limited in Africa and Latin America, with the exception of Mexico and Costa Rica.
4. *Improving the position of some developed countries*. Developed countries are among the winners in the global trade system.
- a. In this context, the significance of the export sector for small developed countries is clear enough. The major multinational companies from these countries are seeing successful trade under the "made in the world" model.
  - b. The industrial production from small developed countries is characterized by strong, highly specialized SMEs that import pre-fabricated or semi-finished products, then export and convert them with added value.

However global value chains also have their weaknesses. Companies participating in the global value chains must be able to guarantee to their clients that they can produce materials to the necessary standard and under acceptable work conditions. Although they provide the opportunity for developing countries to integrate into the world trade market, they're not available to all economies. (Lehman, 2013) WTO admits that not all economies are able to use this form of trading to its full potential. It's true that many poor countries don't take part in the global value chains the way they would like. This is because of

inappropriate infrastructure, knowledge, laws or capacity.

### 3. More trade means better results

The international community is dedicated to the idea that more trade means better results, regardless the individual outcomes for countries. The "made in the world" initiative causes the same effects that have been occurring from free trade and attempts to reframe them in a more positive light.

One aspect is to *report trade balances based on value-added calculations*. This means that *less value will be attributed to the producer of the end product*, and those countries like the US that participate more in design and engineering will see an improved balance. As it was mentioned above, under this method it is said that the United States' trade deficit with China would be 30-40 percent smaller. This would still be a remarkably high number, and while trade deficit numbers are useful, they are only a tool.

Trade deficits lead to bad results, but eventually it is the bad results we consider, not the nominal value that represents the trade deficit. If the values had shown that the United States were running a trade deficit but *maintaining strong job growth*, the WTO's new calculation method might be something worth considering. Instead, we have lost millions of jobs as a result of free trade. Whether you calculate our trade deficit as USD 100 billion or USD 600 billion, *those job losses can still be directly attributed to our failed free trade agreements*. Presenting trade data in a different way will not reopen factories that closed due to competition from foreign competitors who do not have the same labour, environmental or quality standards.

Researchers and policy makers may consider these new numbers. They may even use them to try to convince their constituents that free trade is a good thing. The average American will not care, however. They will see that the factory that once employed them has closed up and gone to Mexico. They will see that GM now buys its parts from Asia rather than the family owned company in their town. Representing trade in an alternative way cannot change this objective reality.

### 4. "Made in the world" and trade flows create winners and losers

These days, the fact that one country researches a product, the next designs it, another manufactures the parts and a fourth takes care of assembly is not an exceptional practice. *"The next airplane you board will likely have a tail made in Italy, doors from France, American control instruments and wings from Japan – a "made in the world" approach that is opening economic doors but risks excluding poorer countries."* This phenomenon derives from so-called global value

chains, which the UNCTAD says make up 80 per cent of global trade.

Several studies have illustrated the concept of value-added trade using Apple's *iPhone* example. This high-tech product is assembled in China, and consequently contributes to China's exports. However Chinese value added represents only a small share of the value of this electronic device, which incorporates components from Germany, Japan, Korea and other economies that manufacture intermediate inputs. Table 1 illustrates this by identifying those countries that provide intermediate inputs into the *iPhone*.

Table 1. Countries that provide intermediate inputs into the *iPhone*

Country	Components	Manufacturers	Costs (USD)
Chinese Taipei	Touch screen, camera	Largan Precision, Wintek	20.75
Germany	Baseband, power management, transceiver	Dialog, Infineon	16.08
Korea	Applications processor, display, DRAM memory	LG, Samsung	80.05
USA	Audio codec, connectivity, GPS, memory, touchscreen controller	Broadcom, Cirrus Logic, Intel, Skyworks, Texas Instruments, TriQuint	22.88
Other	Other	Misc.	47.75
Total			187.51

Source: Xing and Detert, 2010

Table 1 illustrates the value of the intermediate inputs produced by the firms, but *they themselves will have used intermediate imports in their production or sourced intermediate goods from domestic suppliers, who consecutively would have used intermediate imports.*

Identifying these flows is also important, mainly in the context of the example above, because some of those imports may have originated in China.

Moreover, while the country indicated is the country where the firms producing the components are headquartered, these inputs are often produced in other countries. *Infineon*, for example, has several factories in China. Chinese value added may therefore not only be limited to the assembly costs.

The *iPhone* example highlights that, beyond trade flows, more information on royalty payments and income flows is required to answer the question of who benefits from trade. One should also look at ownership: *Foxconn*, the company that assembles *iPhones* in China, is a Chinese-Taipei-owned firm and the value added by mainland China in the example is divided between wages paid to Chinese workers and income for shareholders in Chinese Taipei.

In the same line, a new concern is highlighted among consumers who do not know what to believe when they see "*Made in Switzerland*" on a watch label. *Are Swiss watches Swiss enough?*

## 5. International cooperation for identifying the key features of global value chains

*The global value chains have become a leading characteristic of world trade and investment, offering new prospects for growth, development and jobs.*

The teams of Organization for Economic Cooperation and Development (OECD), the World Trade Organization (WTO) and the United Nations Conference on Trade and Development (UNCTAD). Develop hard work and concentrated cooperation on diverse matters. In this context, these three organizations make collective efforts to develop new tools to measure the trade.

It is common knowledge that *the success in international markets depends on the capacity to import high-quality inputs, and also on the capacity to export.* The intermediate inputs account for over two-thirds of the goods and 70% of the services traded worldwide. As a consequence, action is needed at the moment to put into action an effective structure for powerful, sustainable, and inclusive growth, which every country could benefit from.

*"The above mentioned report helps policymakers to examine with greater clarity the opportunities and challenges associated with the phenomenon of global value chains. Global value chains are undeniably an important component of the globalization process of today."*(Roberto Azevedo WTO Director-General) Open, clear and predictable trade and investment policies require a variety of policies to certify benefits from global value chains as inclusive and widespread. In some developing economies, particularly in those less developed, there remains much work to be done to address specific obstacles to effective participation in global value chains. Aid for trade initiatives and trade facilitation can play a central role in supporting the efforts of those economies.

*"Global production chains are a common feature in many industries involving an increasing number of developing countries. A key challenge is how to generate employment, and upgrade technology and productive capacity in order to maximize development benefits"*.(Mukhisa Kituyi, UNCTAD Secretary-General) Surmounting obstacles to global value chains many developing economies with the fastest growing global value chains participation will record growth rates in GDP per capita.

*"Trade facilitation is about easing access to the global marketplace and doing away with the complicated border crossing procedures and excess red tape that*

raise costs, which ultimately fall on businesses, consumers and our economies. Reducing global trade costs by just 1% would increase worldwide income by more than USD 40 billion, 65% of which would accrue to developing countries.” (Angel Gurría, OECD Secretary-General). Trade facilitation reforms, such as those being negotiated in the WTO, offer considerable potential to diminish trade costs and improve countries’ capacity to take part in global value chains. The costs of trade and investment protectionism, on the one hand, and the benefits of multilateral opening in agriculture, manufacturing and services, on the other hand, are much higher in today’s greatly interrelated world than before.

## 6. The role of statistics in resolving the problems generated by global value chains

The current international trade looks extremely different from when the first rules governing world trade were initially shaped and led to the creation of the GATT. The old division of labour between nations has been completely changed by the recent wave of globalization. *International supply chains are core to this development and traditional boundaries and distances are breaking up.*

In the last decade, the patterns of global trade have changed, and the focuses of countries’ trade policies have also changed.

It is to a greater extent complicated to explain global trade today with conventional trade theories or to understand welfare gains and distribution in a globalized world.

The WTO is recognized as a very important vector for the administration of global trade rules, for the conduct of multilateral trade negotiations and for the settling of trade disputes.

Traditional trade statistics record trade across borders on a gross basis, as a consequence *vertical trade or flows in intermediates are doubled or multiple-counted.* Trade statistics remain arbitrary.

Product definitions do not always allow making a distinction between intermediate and final use. For example, *is packaged software an intermediate or a final product?* Another limitation is that UN classification of Broad Economic Categories only classifies goods. There is no similar classification for services. In the context of off shoring, computer and information services as well as other business services are often used as proxies of intermediate services.

Trade in value added allocates the value added to each step of the supply chain across countries. It allows incorporating the specificity of the new business model on which global manufacturing is based. (Maurer: 2013) *“Better statistics today will contribute to better policies tomorrow” (Pascal Lamy, former Director-General of*

*WTO, during the round table discussion on “New Steps in Measuring Trade in Value Added” at the OECD, Paris on 16 January 2013)* Conventional statistics failed to give a clear image of today’s way of trading in manufactured products. They also failed in totally capturing the enormous role played by services in manufacturing. But most significantly, they were not good enough in ensuring that trade policy is correctly informed by what matters to people: jobs. It is a fact that over the previous two decades, global value chains have changed the old methods of organizing international specialization and considerable comparative advantages.

From this perspective, the former general director of WTO, in 2007, asked a large coalition of organizations, research institutes and statistical offices joined their efforts together to find a way of over passing this statistical gap. Since then, the 2008-2009 global crisis and its collateral considerable trade fall down have concentrated the attention of the analysts on the significance of this issue. The results should be considered as a milestone in this long-term co-operation and attempt of many players and stakeholders.

*How the measure of trade in value-added changes the way of understanding trade and trade policy* are demonstrated in the following three detailed analyses:

1. *The rising importance of services.* As services represent about 20 per cent of total trade, their share doubles when we judge their contribution to the value-added that is traded worldwide.
  - a. The services that are integrated into the value of the merchandise include most of the new business functions which have made possible the development of value chains themselves, such as *research and development, and modern logistics.*
  - b. Accepting the fundamental role of high value-added services in the success of value chains is mainly significant for industrialized countries, because it indicates where their competitive advantages may be and where trade has created jobs for them.
  - c. It is also crucial for developing countries, because it shows the importance of trade facilitation and good transport and logistics services in facilitating trade in value-added.
2. *The significance of imports of intermediate goods in improving the competitiveness of the exports.*
  - a. Nowadays, in order to be a successful exporter, you need to be an active importer. In a simple way, *“imports create exports”.*

- b. This has significant implications for how we should understand today's trade policy. Recognizing that imports of a country are favourable for its exports changes what trade negotiators call "*defensive interests*" and also how they evaluate the cost/benefit balance of adopting and implementing trade remedy measures. Additionally, they may modify the significance of the good old reciprocity principle.
3. *The redefinition of bilateral trade balances, when imports and exports are measured according to their correct national content.* As a consequence, the US trade deficit regarding China is reduced by more than 30-40 per cent after the trade is measured in value-added and not in gross commercial value. One more time, good trade statistics can provide a source for good trade and macroeconomic policies, for good public debates that need to strengthen policy choices, and it can help put multilateral trade negotiations in the right framework.

As a result of the new data, there is a hope that analysts and policy makers will have an improved view of these interdependencies. In this way, there is getting closer to the reality of today's world. The joint efforts for better statistics will contribute to better policies tomorrow. Overall, it is about turning trade numbers into trade intelligence.

## 7. Conclusions

Trade in value added however does not only challenge statistical concepts, it also addresses trade policy issues. Who produces for whom or who should be protected against whom is often judged using trade statistics. Analyzing trade in value added terms offers a complementary vision as it may shed a different light on trade disputes and anti-dumping measures. Trade policy strategies need to be adapted "*Old "mercantilist" policies, based on the vision that trade is a competition between "us" and "them", becomes not only sub-optimal...but also a complete anachronism*". (Alejandro Jara, Deputy Director-General of WTO)

Another interesting thought could be that the international organizations are moving closer to abolishing country-of-origin labels and replacing them with "*Made in the World*" labels because they say it is

necessary to modernize global trade statistics, reduce public pressure on politicians for protectionist trade policies, and reduce public opposition to free trade.

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