Business Reality and Trade Policy – Closing the Gap
This report is part of a series of studies on Global Value Chains published by the National Board of Trade. The reports are:

Adding value to the European Economy 2007/2012
Servicification of Swedish manufacturing 2010:1
Made in Sweden? 2010:6
Global value chains have become an increasingly important aspect of the international trade environment. Until recently, the debate on global value chains has primarily taken place in the academic community. With this report, we would like to stimulate interest among policy makers.

The National Board of Trade has previously contributed to this debate. In 2007 we studied how European shoe production adds value to the European economy despite the fact that manufacturing takes place outside Europe (Adding value to the European economy). In 2010 we concluded that more than one third of Swedish exports are made up of imports, a share that has increased in recent years (Made in Sweden?). The current report discusses global value chains in relation to trade policy. As the title indicates, it highlights the fact that significant developments in world trade have not been matched by changes in trade regulation.

Per Altenberg is the main author of the report. Elenor Hanson Lundström and Carl-Johan von Seth have also contributed.

We are grateful for valuable comments given at a pre-publication seminar on 26-27 January 2012.

Stockholm, March 2012

Lena Johansson
Director General
National Board of Trade
Executive Summary

The trend toward global value chains has created a growing gap between business reality and trade policy. While the nature of global trade has changed, trade regulation in the EU and other OECD economies has remained largely the same. So far this aspect of the debate has not received the attention it deserves. As a result, the implications for trade policy have not been thoroughly discussed.

Revisiting the literature on global value chains

The debate on whether global value chains should be treated as a new economic paradigm remains inconclusive. It is clear, however, that it represents a significant development in world trade since at least the 1980s.

Implications for trade statistics

Gross trade flows are inadequate to describe the modern trade reality. In particular, the US – China trade imbalance is overestimated.

Input-output analysis continues to provide important insights with potentially far-reaching consequences for trade statistics. An operational annual measure of net trade flows would be valuable. At the same time, research efforts must not get bogged down in attempts to map the whole world economy in input-output tables. Resources should also be devoted to analysing policy implications.

Global value chains and economic growth

There is strong evidence that input trade promotes productivity and, by extension, economic growth. A reduction of import barriers on intermediate goods stimulates domestic productivity more than liberalisation of trade in final goods, according to the literature.

Policy recommendations in the literature

The literature on global value chains offers surprisingly few concrete trade policy recommendations. Instead, they are either general in nature or only indirectly related to trade policy.

The conclusion that the costs of national borders have grown as a result of global value chains undercuts protectionist arguments further and underlines the need for non-discriminatory economic regulation.

The debate on global value chains could have the effect that the competition for market access is replaced by a competition for value added in global value chains. It would be unfortunate if such a shift in policy focus leads to a reduced emphasis on competitive market conditions.
Policy options

General options related to trade in goods
As indicated in the literature, reducing input tariffs is a particularly effective way to stimulate productivity. At a time when Europe needs growth stimulating reforms more than ever, we should not ignore reform options that are relatively easy for Member States to digest politically. One such option would be to phase out remaining EU import tariffs on intermediate goods. Canada’s decision to eliminate tariffs on input goods may serve as a benchmark for such a reform.

European businesses that rely on global value chains seek access to big markets while avoiding the fragmentation of hub-and-spoke regional agreements and restrictive rules of origin. The emergence of global value chains makes this challenge more compelling today than it was 10-20 years ago. Another option for the EU would therefore be to consider a plurilateral free trade agreement comprised of countries that account for at least 90 or 95% of EU external trade.

A third option would be to apply a comprehensive approach to sector negotiations. Such an approach would bring negotiations on tariffs, non-tariff barriers and services under one umbrella for each sector.

Rules of origin
The fact that many European firms rely on global sourcing strategies has made rules of origin increasingly out of touch with the world in which European firms operate. EU rules of origin should therefore be reformed in order to correspond better with modern trade patterns and production technology. Four such reform options are discussed in the report.

Anti-dumping measures
The Union interest test in EU anti-dumping (AD) investigations fails to take into account the importance of competitive inputs to European manufacturers. AD investigations also ignore where in the world value is added. As a result, AD measures could hurt both the user industry and the industry they are supposed to protect.

To remedy these problems, the European Commission might consider making quantitative assessments of the Union interest test, based on a standardised model that estimates the costs and benefits of a particular measure. A closer examination of costs and benefits is particularly relevant when firms are able to relocate input purchases to third countries. A more rigorous application of the Union interest test might also include an estimation of EU value added in affected imports.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>1</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>2</td>
</tr>
<tr>
<td><strong>1. Introduction</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>2. Revisiting the Literature on Global Value Chains</strong></td>
<td>6</td>
</tr>
<tr>
<td>2.1 Global value chains and trade statistics</td>
<td>6</td>
</tr>
<tr>
<td>2.2 The growth of intermediate trade</td>
<td>7</td>
</tr>
<tr>
<td>2.3 Global value chains as a new economic paradigm?</td>
<td>8</td>
</tr>
<tr>
<td>2.4 Global value chains and economic growth</td>
<td>10</td>
</tr>
<tr>
<td>2.5 Policy issues</td>
<td>10</td>
</tr>
<tr>
<td><strong>3. The Growing Gap between Trade Policy and Business Reality</strong></td>
<td>12</td>
</tr>
<tr>
<td>3.1 Rules of origin</td>
<td>12</td>
</tr>
<tr>
<td>3.2 Anti-dumping regulation</td>
<td>14</td>
</tr>
<tr>
<td><strong>4. Potential Policy Options</strong></td>
<td>16</td>
</tr>
<tr>
<td>4.1 Back to business?</td>
<td>16</td>
</tr>
<tr>
<td>4.2 General options related to trade in goods</td>
<td>17</td>
</tr>
<tr>
<td>4.3 Rules of origin</td>
<td>18</td>
</tr>
<tr>
<td>4.4 Anti-dumping regulation</td>
<td>19</td>
</tr>
<tr>
<td>Notes</td>
<td>20</td>
</tr>
<tr>
<td>References</td>
<td>20</td>
</tr>
</tbody>
</table>
1. Introduction

The issues raised in this report are prompted by the increasing importance of global value chains, also referred to as trade in intermediate goods and services, global production sharing, trade in tasks, off-shoring, economic fragmentation or vertical specialisation. The terminology differs depending on the author, research orientation and the specific statistical measure that the term refers to. In this report we use ‘global value chains’, ‘trade in intermediate goods and services’ or ‘input trade’ when we refer to the phenomenon more generally. When we use other terms, they refer to specific and previously defined concepts.

The increasing trade in intermediate goods and services has been widely noted in an increasing amount of literature. Several analysts draw far-reaching conclusions from the trend. Baldwin (2006) views it as an economic paradigm shift. Blinder (2006) refers to it as the next industrial revolution.

At the same time as the nature of global trade has changed, trade regulation in the EU and other OECD economies has remained largely the same. This has created a growing gap between trade policy and business reality in recent years. So far this aspect of the debate has not received the attention it deserves. As a result, the implications for trade policy have not been thoroughly discussed.

The purpose of this report is:
- to summarise the growing literature on global value chains
- to highlight discrepancies between trade policy and business reality in a world characterised by global value chains
- to outline potential trade policy options for the EU in response to global value chains.

The report is organised as follows. Chapter 2 revisits the literature on global value chains. Chapter 3 examines two areas that are relevant in a global value chains context: rules of origin and anti-dumping regulation. The final chapter argues that the growing gap between policy and reality requires urgent trade policy responses by the EU.
2. Revisiting the Literature on Global Value Chains

In this section, we revisit the literature on trade in intermediate goods and services. The review approaches the literature thematically along five thematic strains:

- Growth of intermediate trade
- Implications for trade statistics
- Global value chains as a new economic paradigm?
- Global value chains and economic growth
- Policy recommendations

At the end of each section, we provide our own evaluation of the research.

2.1 Global value chains and trade statistics

The academic interest in the emergence of global value chains can be traced back at least to Hummels et al. (1998 and 2001). In two papers Hummels and his colleagues introduce vertical specialisation as a concept and establish a methodology to calculate it.

According to their definition, vertical specialisation is the imported input content of exports. Conversely, a country’s value added of exports is the export value that remains after imported inputs have been deducted from gross exports. This is calculated using input-output (I-O) tables. The work by Hummels et al. has since become a frequent point of reference in the literature.

De Backer (2011) draws the following conclusion regarding how well traditional trade statistics reflect modern trade:

“Trade flows are expressed in gross terms and record the full value of the good, including embodied intermediate inputs; accordingly, imports (exports) are assigned to a single country of origin (destination). Gross trade flows cannot capture the new international division of labour since the country producing the final good appears to export the whole value when in reality it may have only marginally contributed to this value.” (p. 33)

Daudin et al. (2011) find that trade measured in value added terms is 19% of world GDP compared with the gross values, which are 26% of global GDP. According to their calculation, net exports are thus overestimated by a third. They conclude that if US-China trade is estimated based on value added calculations and if we take into account the value of intangible assets flowing from the US to China (returns on intellectual property rights etc.), the US trade deficit with China may be erased altogether. Needless to say, a sharp reduction in the US-China trade deficit might also change perceptions among policy makers and, ultimately, trade policy relations between the two countries.

According to Lau et al. (2010) the US trade deficit with China falls by up to 80% when measured in value added terms. China still has a trade surplus with the US but it shrinks to insignificant levels.

Dean et al. (2008) also discuss vertical specialisation in Chinese trade. They provide strong evidence of an Asian network of intermediate suppliers to China. In 2002, vertical specialisation ranged between 25% and 46%, with some individual sectors as high as 52-95%. They also show that vertical specialisation of Chinese exports declines with the level of development of the trading partner. This means that a large part of Chinese exports are not “made in China” at all. It also means that Chinese exports to India are probably more Chinese than Chinese exports to the US or the EU.

Based on Swedish input-output tables, the National Board of Trade (2010) arrives at results that are similar to Daudin et al. In recent years, Swedish exporters have become increasingly dependent on input goods and services. Therefore, gross trade statistics provide an incomplete picture of Swedish trade. Since one third of Swedish exports are really imports (in value added terms), only two thirds of exports ‘add value’ to the Swedish economy in terms of wages and capital returns.

Another conclusion is that almost half of the duties on Swedish imports are levied on goods used in production, i.e. input goods. In addition, an estimated 60% of total tariffs on intermediate goods were levied on inputs used in the production of exports. In other words, EU tariffs on input goods add considerable costs to Swedish exporters.

Conclusions

Studies that focus on the implications of integrated global value chains for trade statistics tell us at least two things:

- Gross trade flows are inadequate to describe modern trade patterns.
- The US-China trade imbalance is overestimated.

Value added trade statistics will not replace traditional (gross) trade statistics within the foreseeable future. However, input-output analysis con-
continues to provide important insights with potentially far-reaching consequences for trade statistics. In the trade-off between speed and comprehensiveness, an operational annual measure of net trade flows might be more useful than comprehensive world-wide input-output tables every five years. Such a measure would be valuable in order to adapt trade statistics to a world of global value chains.

At the same time, we should avoid the risk that research efforts are bogged down in attempts to map the whole world economy in input-output tables. Resources should also be devoted to analysing the growing gap between trade reality and trade regulation as well as the implications for trade policy. Where do we find particularly large discrepancies between business reality and trade policy? How relevant are current rules-of-origin? Why do we keep undermining the competitiveness of our businesses by forcing them to pay tariff duties on their inputs?

2.2 The growth of intermediate trade

Literature that estimates the growth of trade in intermediate goods and services gives us an indication of how significant the trend towards global value chains is. It is important to bear in mind, however, that different methodological approaches yield different results.

According to Yeats (2001), Athukorala and Yamashita (2006) and Athukorala (2010) input trade has grown much faster than trade in final goods in recent decades. They all rely on a methodological approach that is different from the OECD’s input-output approach (referred to below).

The International Monetary Fund (IMF, 2011) concludes that vertical specialisation has accelerated since the mid-1990s, increasing by more than 20% in the 10-year period up to 2005. It has been particularly pronounced for China, Japan and Germany, but less so for the US. The IMF also remarks that the emergence of global supply chains has changed the way that trade responds to relative price changes:

“Higher imported content in exports is likely to lower the sensitivity of trade to changes in the exchange rate. For instance, an appreciation of the domestic currency against all trading partners implies that while exports become more expensive, imported intermediates also become cheaper, mitigating the impact of relative prices on trade flows” (p. 31)

A study by Lejour et al. (forthcoming on behalf of the European Commission) also argues that the fragmentation of production processes across national borders has increased progressively and is expected to continue.

De Backer (2011) draws a similar conclusion on behalf of the OECD:

“Results based on the OECD I-O database clearly show that countries’ exports are increasingly composed of intermediate inputs that are imported from abroad; between 1995 and 2005, the import dependency of exports increased in almost all [OECD] countries.” (p. 31)

Yi (2003) asks if vertical specialisation can explain the dramatic growth of world trade during the late 20th century, a question which he answers affirmatively. He finds that more than 50% of US trade growth since 1962 can be explained by vertical specialisation.
Mirodout et al. (OECD, 2009) find that intermediate trade represents 56% of world trade in goods with strong annual growth rates during the period 1995-2006. They also report that trade in final goods only represents 21% of world trade with trade in capital goods filling the gap as a third category. “Trade flows are thus dominated by products that are not consumed but further used in the production of other goods and services.” (p. 5)

At the same time, they report that the share of input goods to final goods in OECD trade has remained fairly constant in recent years. The average annual growth rate of trade in intermediate goods (6.2%) is only slightly higher than the corresponding figure for final goods (5.9%). For services the difference is larger. Trade in intermediates has grown by 7.0% annually while trade in services for consumption has grown by 6.3%.

Conclusions
Intermediate trade has grown rapidly over several decades. This has contributed to a world economy characterised by global value chains and to the boost in world trade that we associate with globalisation.

While the trend toward a higher share of intermediate trade to total world trade continues for services, it is not clear that the same trend still applies to trade in goods. This conclusion is intuitive if we look at the driving forces behind the increase in input trade. While the revolution in information and communication technology (ICT) reduces coordination costs across distances, spurrying trade in input goods, it is even more important for trade in services as entire sectors become tradable.

The 2008-2009 financial crisis and the expected downturn in 2012 make it more difficult to assess the future, but the trend towards global value chains can be expected to continue. This conclusion is based on the following observations:

- It is unlikely that the learning curve for businesses to take advantage of advances in information and telecommunication technology has levelled out yet.
- The importance of emerging economies in world trade is likely to continue to grow for a number of years.
- In many emerging economies, global or regional value chains dominate trade. As the previous section revealed, this is particularly true in the case of China.

2.3 Global value chains as a new economic paradigm?
If there is any paper during the past 10 years that should be considered essential reading on the topic of global value chains, it is Richard Baldwin’s Globalisation: the great unbundling(s) (2006).

Before the Industrial Revolution, consumption relied on self-sufficiency in production. The principal part of the economy was not traded in the market place at all. No specialisation took place and there was little economic gain from specialisation, much less from international trade.

According to Baldwin, the first unbundling represents the separation of production from consumption in the economy made possible by the Industrial Revolution. Internal transaction costs and transportation costs determined the seat of production, which became known as the firm. Within the firm, all tasks in the manufacturing process were ‘bundled’ together in one kit.²

According to Baldwin the ‘second unbundling’ slices up production in separate tasks – research and development, assembly, data entry, marketing etc. This fragmentation of production began in the mid-1980s and was made possible by falling transportation costs and the information technology revolution. At first, it mainly concerned manufacturing, but lately it has spread to services.

“In a nutshell, the first unbundling allowed the spatial separation of factories and consumers. The second unbundling spatially unpacked the factories and offices themselves” (p. 7).

In Baldwin’s view the second unbundling represents an economic paradigm shift.
“As the second unbundling opened up firms – viewed as a black-box package of ‘tasks’ in the old paradigm – global competition came directly into factories and offices; global competition occurred on a task-by-task basis rather than firm-by-firm or sector-by-sector basis. The new paradigm helps us understand the impact of globalisation when international competition plays itself out at the level of tasks within firms.” (p. 8)

Blinder (2006) uses even stronger terms to describe the trend towards global value chains. In his view, offshoring represents the next industrial revolution.

“We have so far barely seen the tip of the iceberg, the eventual dimensions of which may be staggering.” (p. 114)

Blinder refers to the current transformation from a service economy to the information age as the third industrial revolution. The two previous industrial revolutions were the move from agriculture to manufacturing in the 19th century and from manufacturing to services during the second half of the 20th century.

He also claims that it will be increasingly difficult to predict which jobs will be offshored, since offshoring will no longer depend on skill content but on whether tasks can be carried out electronically or not. Financial services and airline reservation services are equally likely to be offshored. As a consequence, education will no longer be a policy panacea.

Mirodout and his colleagues at the OECD (2009) are more cautious in their estimation of the trend towards global value chains than both Baldwin and Blinder:

“While important changes have occurred in world production in terms of unbundling, rise of outsourcing, offshoring and vertical specialisation, trade data on intermediates give a more balanced and nuanced picture of what is happening. New sourcing strategies of [multinational enterprises] have not fundamentally altered trade patterns.” (p. 6)

An important conclusion reached by Mirodout et al. is that trade in intermediate goods and services is particularly sensitive to transportation costs and costs associated with import barriers.

“Bearing in mind the specificities of trade in intermediates and in particular their higher sensitivity to trade costs, including both transport costs and trade barriers, a higher degree of trade liberalisation is required for countries wishing to promote trade in intermediates and the integration in global production networks.” (p. 6)

Grossman and Rossi-Hansberg (2006) argue that the trend towards global supply chains is so important that it requires new trade theory. In their view, globalisation has entered a new phase. To underline this point they named one important article The rise of offshoring: It’s not wine for cloth anymore. In this article, they also coin the phrase ‘trade in tasks’ to describe the phenomenon traditionally referred to as off-shoring.

In 2008, Grossman and Rossi-Hansberg published a formal theory to model the effects of trade in tasks on production factors (capital and labour) and factor prices. Their main point is that when theory allows for trade in tasks, low-skilled wages in rich countries may in fact rise when some low-skilled tasks are offshored, a result that is counter-intuitive in a traditional theoretical framework. The reason is that the average productivity of domestic workers rises when they are able to specialise in tasks that they are particularly skilled at, while tasks where they do not have the same edge are offshored.

Rojas-Romagosa (2011) dismisses Grossman’s and Rossi-Hansberg’s theoretical result that offshoring could increase wages in low wage sectors as “indeed a very special case”. The research by Rojas-Romagosa and other empirical studies that he refers to, render little support for the theory proposed by Grossman and Rossi-Hansberg.

Lanz, Mirodout and Nordås (OECD, 2011) also analyse labour market effects of trade in tasks. They argue that the fear of massive job losses due to a surge in offshoring is exaggerated. While it is technically possible to offshore more tasks today than in the past, transaction and coordination costs will still keep most tasks ‘bundled’ together in domestic firms. They also note that during the 20th century, Taylorism (slicing up production a la Charlie Chaplin in the 1936 movie Modern Times) eventually gave way to Toyotaism (characterised by multi-tasked, multi-skilled employees working in teams). In other words, it is possible that global production will follow trends of unbundling and rebundling that ebb and flow over time.

Conclusions
The debate on whether the trend towards global value chains should be treated as a new economic paradigm remains inconclusive. It is clear, however, that it represents a significant development in world trade since at least the 1980s.
The conclusion in the literature, which states that intermediates are especially sensitive to trade costs, indicates that the remaining EU tariffs on input goods restrict external EU competitiveness unnecessarily.

2.4 Global value chains and economic growth

According to Miroudot et al. (2009) a higher share of imported inputs in the domestic production improves productivity and reduces inefficiencies in the use of technology.

“Restricting trade in intermediate goods and services can have a very negative impact on growth… One should keep in mind the multiplier effect that is involved. A less efficient domestic input will not only diminish the productivity of using industries but also the productivity of all other industries to which the using industry is providing inputs.” (p. 35)

Imports of intermediate goods affect domestic productivity in several ways, including through the transfer of technology. Imports of intermediate goods are therefore likely to have a stronger impact on domestic productivity than imports of final goods which do not impact the domestic production process.

Empirical studies on specific countries support this view. In a study on Indonesia, Amiti and Konings (2007) report that productivity gains from the reduction of input tariffs are much higher than productivity improvements from lower tariffs on consumer goods. In fact, they are “at least twice as high as any gains from reducing output tariffs”.

Similarly, Goldberg et al. (2008) report that trade liberalisation in India after 1991 resulted in a significant expansion of the domestic product scope, along with higher productivity.

Conclusions

There is strong evidence that input trade promotes productivity and, by extension, economic growth. This is in line with well-known empirical results on the effects of trade more generally.

However, the finding that a reduction of import tariffs on intermediate goods stimulates productivity more than trade liberalisation for final goods is not as well-known. It lends support for Canada’s recent decision to eliminate tariffs unilaterally on most of the country’s non-agricultural inputs.

2.5 Policy issues

Baldwin (2006) argues that the ‘second unbundling’ has important policy implications. Since global competition plays out on the level of tasks rather than sectors, it becomes impossible to predict which workers will be displaced by globalisation. Under the old paradigm, whole sectors could be offshored, but that is no longer the case. As a result, we should stop applying policies on a sector level to reap the benefits from globalisation or to protect workers from displacement.

Moreover, Baldwin claims, the skill content of production no longer determines whether a task is likely to be offshored or not.

“The moral of the story is one of caution. Since it will be more difficult to predict globalisation’s winners and losers in the future, EU governments should be more cautious about pushing workers to acquire specific skills.” (p. 42)

He concludes that

“it will be even more important to shift to welfare state models that protect workers rather than jobs, that encourage adjustment with employment insurance and re-training schemes. Or to put it even more directly, attempts to save jobs with employment protection laws may result in even more jobs being offshored.” (p. 46).

Grossman and Rossi-Hansberg (2008) draw two major policy conclusions from their work. First, they argue that the insight that wages could increase even in sectors where certain tasks are offshored, reduces a conflict of interests within the domestic economy associated with globalisation.

Second, they suggest that trade policy should focus on tasks, rather than goods or services:

“When offshoring is possible, optimal policy should target tasks, not goods. This suggests that trade taxes should be levied on imported and exported value added, not the full value of traded goods.” (p. 1995)

This is equivalent to how most countries apply value added taxes on domestic consumption. However, Grossman and Rossi-Hansberg do not explain how value added import tariffs would work in practice.

The paper that deals most extensively with policy issues related to the emergence of global value chains is De Backer (2011). First, De Backer argues that global value chains indicate that more
specific policies might be needed. The fact that the basic unit of analysis is now individual firms or even tasks within firms, rather than sectors, suggests a role for "more fine-grained policies".

Secondly, he identifies policies designed to increase the integration into global value chains as important. This is particularly relevant for developing countries. In this context, the significance of openness to trade and investment is underlined: "Given the increasing importance of imports for exports within [global value chains], the costs of "national borders" have most likely grown. Protectionist (trade) policies may therefore directly hurt the competitiveness of domestic industries; instead of 'beggar thy neighbor' policies, protectionist policies might become 'beggar thyself' policies" (p. 36).

Other policy areas that will gain in importance, according to De Backer, are (1) high-quality infrastructure that reduces transportation costs, (2) investment in information and communication technology, and (3) international standards.

A third category of policy responses to global value chains identified by De Backer relates to capturing value within global value chains. In his view, the geographical distribution of value creation is of particular policy interest. Policy makers should therefore analyse location factors that attract companies with a "global mandate".

Governments should also help firms grow to more important positions within global value chains through innovation policies and policies related to intangible assets. De Backer appears to suggest that governments should have a role in helping firms to "capture a larger share of value", "shape the industry structure" and "change competitive conditions within the whole value chain."

Conclusions
The literature on global value chains offers surprisingly few concrete trade policy recommendations. Instead, they are either general in character or indirectly related to trade policy.

Baldwin’s recommendation against sector level policies as well as industrial policies that pick winners is sound economic policy but it is hardly new to policy makers.

Grossman’s and Rossi-Hansberg’s idea of value added import tariffs are sound in theory, but they are difficult to implement. The idea is most likely a non-starter politically.

De Backer argues for task-specific policies. The arguments remain on a high level of abstraction, however, and it is difficult to see how it would work in practice. It is, moreover, possible that task-specific policies could clash with international agreements that seek to limit state aid and firm-specific subsidies. For these reasons, the suggestion that more fine-grained policies represent a suitable response to global value chains is unconvincing.

De Backer’s next policy suggestion – integration into global value chains and openness to trade and investment – is familiar. However, the conclusion that the costs of national borders have grown as a result of global value chains is significant. It undercuts protectionist arguments further and underlines the need for non-discriminatory domestic economic regulation.

Finally, there is the (apparent) suggestion by De Backer that policies should be designed to capture value in global value chains. As this suggestion indicates, the debate on global value chains could have the effect that competition for export markets is replaced by a competition for value added in global value chains. It would be unfortunate if such a shift in policy focus leads to a reduced emphasis on competitive market conditions.
3. The Growing Gap between Trade Policy and Business Reality

Global value chains are a modern business reality. At the same time, it is no longer a particularly new reality. It has been an important feature of the daily life of many European businesses for a long time. In that sense, the growing attention to global value chains among academics and policy makers is overdue.

While there are important issues related to how well traditional statistical measures reflect trade relations, there is reason to focus on another issue that has been largely ignored in the debate: The fact that global value chains are an increasingly dominant feature of modern trade means that there is a growing gap between trade policy and business reality. In this report we have selected two trade policy areas that serve as illustrations of this: rules of origin and anti-dumping regulation.

A range of other trade policy topics are also relevant in a global value chains context, e.g. trade in services, trade facilitation, export restrictions, trade and competition, trade-related investment measures, intellectual property rights, international standards and subsidies. However, it was never the intention of this report to provide a comprehensive coverage of all trade policy aspects of global value chains.

3.1 Rules of origin

It is no coincidence that the title of our previous report on global value chains was *Made in Sweden?* Issues related to the localisation of production of goods and services and to where value is added in the world economy are at the core of the debate. With this in mind, it is natural to begin a discussion on the growing gap between policy and reality with (preferential) rules of origin. While rules of origin previously often ended up at the far end of trade policy priorities, they are critical in the context of global value chains.

Rules of origin are regulations that determine the economic nationality of goods and they are an inevitable part of free trade areas (FTAs). The main purpose of rules of origin is to prevent trade deflection; that goods from non-partner countries are transhipped through a partner country in order to obtain tariff preferences. In order to apply trade preferences under an FTA, it needs to be determined if a traded good originates in one of the partner countries. The purpose of an FTA is to stimulate trade by granting preferential market access to partner countries. In the absence of rules of origin, the country with the lowest external tariffs is likely to become a transit country for goods that are imported to the FTA from third countries. FTAs have multiplied during the past two decades. As a result, it has become more difficult for firms to get an overview of and adjust to different rules of origin requirements. In addition, it has become increasingly difficult to determine the nationality of goods as a result of increased vertical specialisation.

**Costs associated with rules of origin**

Restrictive rules of origin incur welfare costs on society in ways that are similar to other barriers to trade. Here, however, the analysis focuses on costs to firms.

The costs faced by firms as a result of rules of origin can be divided into *administrative costs* and *production costs*. Administrative costs arise from administrative procedures required to prove compliance with the rules of origin. Production costs arise from changes in production that are necessary to comply with rules of origin requirements. These costs are related to the special characteristics of the firm and the sector concerned, notably:

- The firm’s ability to adjust its underlying production technology, and thereby the share of its value added.
- The price differential between imported and domestic input.
- The level of preference margins.
- How the demand for the final goods responds to price changes.

**Trade-facilitating rules of origin**

There are two commonly used indicators for measuring the impact of rules of origin on trade: trade preference utilisation rate and total aggregated trade flows, as well as an indicator that is used to capture the restrictiveness of the rules: the restrictiveness index. There is usually a positive correlation between high MFN tariff rates and strict rules of origin (Estevadeoral, 2000). In general, rules of origin regimes with multiple product-specific criteria have a larger negative effect on trade than regimes with across-the-board criteria. Furthermore, the utilisation rates of the trade preferences are lower in trade regimes and in product groups where the rules of origin are stricter (Cadot et al., 2005).
Studies that have examined aggregated trade flows between preferential trade agreement parties point out that restrictive product-specific rules of origin reduce aggregated trade flows. However, general rules of origin that allow for flexibility in the application of the product-specific rules (such as cumulation, tolerance rule and self-certification) can limit the trade-distorting effect of the rules of origin (e.g. Estevadeoral and Suominen, 2005).

In theory, the percentage of foreign inputs permitted should be balanced. If the percentage is too high, the third country benefits instead of the parties to the agreement. If the percentage is too low, participants of the agreement cannot benefit from internationally competitive input goods. This could have the following negative consequences:

- The producer is not granted tariff preferences.
- The producer changes to a less competitive supplier within the FTA.
- The producer must make costly investments to meet rules of origin requirements.

While little analytical work has estimated the overall minimal level of restrictiveness needed in order for rules of origin to meet their objectives, various studies have shown how the cost of compliance with rules of origin often outweighs the benefits of the tariff preferences (e.g. Brenton and Manchin 2002). Since the objective of FTAs is to facilitate trade this is obviously not satisfactory. It is clear that in many cases, the rules of origin are too strict.

**Rules of origin and global value chains**

In a world where EU businesses depend on global value chains, rules of origin become particularly important. Restrictive rules of origin reduce the ability of firms to increase their productivity through integration into global production networks. Firms seek to use the most efficient inputs in production, and sourcing decisions may be hampered by rules of origin. Instead, less efficient inputs are used in order to meet rules of origin requirements. In the end, constrained access to efficient inputs increases production costs and damages the ability of EU firms to compete in global markets.

The European Commission (2010) highlights the relation between open trade and competitive EU firms in the Communication “Trade as a driver of prosperity”:

“Trade openness facilitates the integration of local companies in global production chains. It makes them more productive and competitive, and creates more employment. More than two thirds of EU imports are imports of intermediate goods, many of them much needed to ensure the competitiveness of EU companies both in Europe and abroad.” (p. 14)

The communication also points out the need to relax rules of origin:

“Global commerce is characterized by large and increasing volumes of trade in intermediate products. Producers take advantage of different costs in different locations to source the cheapest inputs possible. Allowing producers access to raw materials or intermediate products from low cost international sources through relaxed rules of origin (RoO) is therefore vital.” (p. 59)

**Challenges ahead**

The increase in economic fragmentation has added to the complexity of determining the economic origin of goods. Two challenges for rules of origin arise from this.
First, the market place is increasingly global. Firms source goods and services internationally and are part of global value chains. This complicates the process of defining the origin of products. If rules of origin are not designed in a way that roughly reflects how firms organise their production, they will comprise ever-greater barriers to trade.

Second, regulation has not developed at the same pace as technology. As a result, production processes stipulated in rules of origin protocols do not always correspond with reality. With strict rules of origin, the rift between rules and reality may grow as the development and innovation of production processes takes place. With rules of origin that allow for flexibility, the rules are not as likely to become outdated.

As a consequence of these two challenges, rules of origin often appear out of touch with the world in which firms operate. Rules of origin need to be better aligned with modern production processes and technological development. More generous rules of origin encourage specialisation and sourcing of inputs from the most competitive source. In the end, it allows European businesses to take advantage of the productivity gains associated with global value chains.

Altogether, this creates a strong argument in favour of reformed rules of origin that are modern, simple and harmonised. We will return to this in Chapter 4.

3.2 Anti-dumping regulation

Global value chains have made trade in intermediate goods an essential aspect of European manufacturing. Despite this, metals, chemicals and other raw materials remain popular targets in EU anti-dumping (AD) policy. In 2008, almost 80% of all investigated cases targeted input goods.\(^4\)

**Anti-dumping and the Union interest test**

In EU anti-dumping legislation, the ‘Union interest’ (previously ‘Community interest’) clause is supposed to accommodate the interests of the user industry. According to Article 21 of the anti-dumping regulation, measures shall be based on an “appreciation of all the various interests taken as a whole, including the interests of the domestic industry and users”. As the European Commission states in one anti-dumping case (*Farmed Atlantic Salmon*, 2003), “[t]his calls for an appreciation of all economic interests in the Community.”

---

**Box 1: The Union interest test and the economic impact of anti-dumping measures on ferro-silicon**

In 2007, provisional anti-dumping measures were imposed on ferro-silicon, an input good in the EU steel industry, from China, Egypt, Kazakhstan, Macedonia and Russia. Imports from these countries have since been the subject of duties ranging from 5 to 34%.

**Table 1. Key figures for the EU-25 ferro-silicon market in 2006**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra EU-25 total exports</td>
<td>€39 million</td>
</tr>
<tr>
<td>Extra EU-25 total imports</td>
<td>€450 million</td>
</tr>
<tr>
<td>Total imports subject to measures</td>
<td>€328 million</td>
</tr>
<tr>
<td>EU-25 production for the EU market</td>
<td>€135 million</td>
</tr>
<tr>
<td>No. of employees in protected industry</td>
<td>1 280</td>
</tr>
<tr>
<td>No. of employees in user industry</td>
<td>180 000 (approximation)</td>
</tr>
</tbody>
</table>

Source: Eurostat, European Commission, own calculations

In the investigation, all the users that were able to respond to the Commission’s questions opposed AD measures because they were concerned about losing competitiveness in downstream markets. The investigation, on the other hand, argued that ferro-silicon represented a small share of total production costs and, therefore, that the measures did not contravene the Union’s interest.

Our own calculations indicate that the cost-benefit analysis is not favourable at all for the EU industry as a whole (i.e. both users and import-competing firms). When costs and benefits were simulated, using the Copenhagen anti-dumping model, the cost-benefit ratio turned out to be 8:1. Another estimation based on ex-post data provided a cost-benefit ratio of 4:1. If these estimations represent a reasonably accurate reflection of the real outcome, it is difficult to understand how it can be argued that the imposed AD measures are in the Union’s interest.

Source: National Board of Trade, forthcoming
As it is currently applied, however, the Union interest test leaves great room for discretion. In 2005, the National Board of Trade examined this aspect in 20 AD cases. The Board argued that the economic interests of parties other than the complainant were being dealt with in passing, using a routine set of arguments in favour of intervention.

A forthcoming study by the Board investigates more closely the Union interest test in AD measures that target input goods (see box 1). According to the investigation, the user industry has not once, since at least 1998, been able to prove an interest in keeping its input source free from intervention. The Union interest test thus fails to take into account the importance of open supply chains to European manufacturing firms operating in global markets.

It should be evident that today’s business environment calls for a more careful evaluation of the downside effects of the extensive interventions that anti-dumping policy brings.

User industry response to AD measures

Anti-dumping measures are intended to align the price of ‘dumped’ imports with the price levels of the EU industry. Successful anti-dumping policy thus adds cost to the user industry as purchasing prices increase. The user may respond by:

- Continuing to import from the country accused of dumping and pay the duties.
- Shifting their sourcing to other relatively expensive EU suppliers.
- Shifting their sourcing to other relatively expensive third-country suppliers.

The efficiency of AD measures is determined by how much it increases the income of domestic producers. If AD measures merely divert trade to third countries, they are clearly counterproductive since the user industry loses while the import-competing industry remains unaffected. The only way an AD measure can be in the Union’s interest is if the protected industry gains.

To get a better picture of the business reality, we asked a few multinational companies to describe their response to EU anti-dumping measures on intermediate goods with respect to the three options listed above. Among the multinational firms, the solution appeared to be to relocate factories from the targeted country to other third countries (resulting in trade diversion to third countries).

One company was able to elaborate on the costs for this procedure, stating that it paid approximately €1 million in anti-dumping duties before it set up a new factory in a neighbouring third country at the cost of approximately €350 000. In this process the company also carried unidentified costs for cancelling a large number of shipments and dismantling production at its previous factory. In this case, the AD measures thus resulted in significant costs to the industry without aiding EU import-competing producers.

Anti-dumping practice and global value chains

The trend towards global value chains has made European businesses increasingly dependent on inputs at competitive prices. Moreover, as research by Miroudot and his OECD colleagues shows (referred to in Chapter 2), trade in intermediate goods is particularly sensitive to import barriers. The fact that a disproportionate (80%) share of EU anti-dumping measures target input goods is therefore disconcerting. In the end, increased costs are either borne directly by the user industry through duties or indirectly through relocation costs and reduced predictability. In the example discussed in box 1, the cost-benefit effects were overwhelmingly negative. Despite this, the user interest did not influence the outcome of the anti-dumping investigation. In fact, the user interest has not influenced the outcome of a single anti-dumping case since at least 1998.

For these reasons, it would be wise to develop instruments that permit us to assess costs and benefits of individual AD measures more carefully. At the very least, it would be useful to adopt a common framework for analysis that allows regular cost-benefit examination of the effects of EU anti-dumping policy.

Anti-dumping practice and value-added considerations

This report focuses on input trade, but, as the Board has shown previously (Adding value to the European economy, 2007), global value chains are also relevant in the context of AD measures on consumer goods. In the study, we found that EU value added in shoes imported to the EU from China and Vietnam ranged from 50 to more than 80%. However, anti-dumping investigations do not take into account where value is added in the production process. As a result, the EU shoe industry could potentially be hurt by the same measures that are supposed to protect it.
4. Potential Policy Options

As Chapter 2 and 3 have shown, it is essential to take a fresh look at EU trade policy in light of the emergence of global value chains. While the nature of trade has changed – blurring geographical borders as well as boundaries between imports/exports and goods/services – European trade policy has remained largely the same.

4.1 Back to business?

Before discussing potential policy options, however, it is important to place the trend towards global value chains in a wider trade policy context. For a long time, economists have argued that free trade is the preferred policy, irrespective of what other countries do. From this perspective, trade negotiations are a strange concept built on the premise that ‘I will stop shooting myself in the foot if you also stop shooting yourself in the foot.’ The ultimate rationale of trade negotiations is thus not to solve economic problems but political problems. The purpose is to mobilise domestic export interests in favour of trade liberalisation in order to counter-balance protectionist interests. Trade negotiations are a means to achieve trade liberalisation, not an end in itself.

Baldwin (2011) explains further:

“The political economy logic of reciprocal liberalization is well understood. Reciprocity harnesses mercantilist interests in each nation to the task of lobbying against protectionists – a political economy realignment that makes it optimal for governments to remove tariffs they previously found optimal to impose.” (p. 17)

While negotiations may seem an unnecessarily complicated way to liberalise trade, this Faustian bargain with mercantilism has served us well for more than 60 years. After more than 10 unsuccessful years of multilateral trade negotiations under the World Trade Organisation (WTO), however, it appears that this strategy is not working anymore.

In May 2011, a high-level group of trade experts chaired by the former WTO Director-General Peter Sutherland, and Professor Jagdish Bhagwati of Columbia University published a report entitled World Trade and the Doha Round. It begins as follows:

“This report was conceived four months ago as a mild corrective. It is being published as an urgent warning. Over the last month ... the Doha Round of multilateral trade talks launched in 2001 has moved from lasting progress to imminent and permanent failure. Against a crowded and volatile international backdrop this might seem a prosaic and peripheral crisis. The message of this report is that it is not.” (p. 1)

While the WTO is not only a forum for multilateral trade negotiations, the failure to conclude the Doha Development Agenda (DDA) is likely to have a profound effect on the world trading system. For 60 years, the international community relied on the mechanism of negotiated market access exchange to liberalise trade. This mechanism is the core of the world trading system. After more than a decade of unsuccessful DDA negotiations, it appears that it is no longer functioning at the multilateral level.

One prominent explanation for the failure to conclude the DDA is undoubtedly the insufficient interest from the business community. According to the logic described above, export industry pressure is a necessary condition to achieve trade liberalisation through negotiations. Without it, there is in fact no intellectual foundation for conducting trade negotiations at all. With this in mind, one conclusion is critical if the objective is to revive the concept of trade liberalisation through multilateral negotiations: The interests of our export industry must once again be the core of EU trade policy. And in order to reignite the interest of the business community, we must shape a trade policy agenda that corresponds with the reality in which modern businesses operate.

This observation brings us back to the phenomenon of global value chains. As this report has argued, there is a growing gap between business reality and trade policy. The final chapter therefore presents policy options that could bring EU trade policy up to date with business reality. In the next section, general options related to trade in goods are discussed, while the following two options relate specifically to the areas discussed in Chapter 3: rules of origin and anti-dumping regulation.

All policy options are based on the view that EU trade policy must reflect the modern business environment better in order to be successful. They should not be treated as final options, but as ideas that policy makers might want to take a closer look at in order to align trade policy better with global value chains. It should also be noted that multilateral trade liberalisation, based on the modalities that are on the table in the DDA, are still preferable to the general options discussed below.
This report is focused on trade in goods. In 2012, the Board will also analyse policy implications for services in the context of global value chains. As mentioned above, there are also other trade policy areas that merit further scrutiny in a global value chains context, e.g. trade facilitation, international standards, export restrictions, trade and competition, trade related investment measures, IPR etc.

4.2 General options related to trade in goods

In one sense, we always knew the emperor was naked. Few policy makers really believe that import barriers are good for Europe’s economy. With the growing importance of global value chains this has become even more evident. When EU businesses depend on global production chains, import tariffs on intermediate goods do not serve any justifiable purpose anymore. The emperor has lost any remaining protectionist fig leaf.

The WTO Deputy Director-General Alejandro Jara made a similar point (using a different metaphor) at the 2010 World Input-Output Database Conference in Vienna:

“Old ‘mercantilist’ policies… become not only sub-optimal (which they usually were even when the world was round) but also a complete anachronism in our new flatter world.”

Moreover, as indicated in the literature, reducing input tariffs is a particularly effective way to stimulate productivity. At a time when Europe needs growth reforms more than anything else, we should not ignore the ‘easy’ options, i.e. options that are relatively easy for Member States to digest politically. One such option for the EU would be to phase out remaining import tariffs on intermediate goods. This would align our trade policy better with the reality of global value chains and the intentions of the Europe 2020 agenda. Canada’s recent decision to eliminate tariffs on intermediate goods may serve as a benchmark for such a phase-out. One aspect of this option that could draw criticism is the fact that a tariff free treatment of intermediate goods but not of final goods would increase the ‘effective rate of protection’ for final goods in the domestic market.

Another option would be to launch negotiations on a plurilateral FTA, comprising countries that account for at least 90 or 95% of EU external trade. European businesses seek access to big markets while avoiding the fragmentation induced by hub-and-spoke regional agreements and restrictive rules of origin. The trend towards global value chains makes this challenge more compelling today than it was 10 or 20 years ago. A plurilateral FTA that is open to all countries (possibly an open OECD FTA) would be a straightforward way to secure long-term predictability for EU-dominated production chains. At the same time, it would create incentives for additional countries to join. A potential drawback with this option is the fact that it would erode preferences granted to developing countries under various preferential trade arrangements.

A third option would be to apply a comprehensive approach to sector negotiations along the lines proposed by Lee-Makiyama (ECIPE, 2011) for the ICT sector. Such an approach would respond to global value chains by bringing negotiations on tariffs, non-tariff barriers and services (including movement of persons) under one umbrella. According to Lee-Makiyama, this is a logical response to developments in the world economy over the past 15 years.
“Where we talked of trade in IT products in the past, there is now a digital economy with little distinction between goods, services or national borders.” (p. 24)

While comprehensive sector agreements would not have global coverage, they would avoid the geographical fragmentation of overlapping regional trade agreements. Another benefit with this approach is the fact that it would raise the interest of the business community within each sector. Business engagement in the negotiations could be expected to be strong, not least because the negotiations would focus on industry-specific issues. One downside of this option is that a comprehensive approach to sectors would backtrack on the work on modalities for non-agricultural market access and services in the DDA.

4.3 Rules of origin

As Chapter 3 argued, rules of origin have in many cases become unnecessarily complex. Modern rules of origin need to be better aligned with the reality of global value chains. Below, we discuss four options that are steps in this direction.

1. Allow full cumulation
Cumulation allows producers to use imported inputs in the production of a good. Materials originating in one party of the agreement/arrangement are considered to be materials originating in the other party when incorporated into a product obtained there.

2. No prohibition of duty drawback
A prohibition of duty drawback is a standard rule in the EU’s current rules of origin protocols. This rule prohibits the refund of custom duties on imported intermediate goods that are later included in a final product exported to an FTA partner under preferential tariff rates. The purpose is to avoid double preferences.

However, an important benefit with duty drawback is the fact that it encourages trade with intermediate goods. It thus allows the export industry access to efficient inputs.

3. Avoid multiple product-specific criteria and allow for greater relaxation in the product-specific rules
Product-specific rules of origin are specific rules based on the Harmonised System (HS). These rules
stipulate the amount of work or processing that needs to be carried out in order for the product to obtain originating status. The product-specific rules differ between products, sectors and FTAs. With different rules of origin in different FTAs, traders face a cumbersome system.

Rules of origin regimes with across-the-board criteria for the majority of products have less negative effects on trade than regimes that rely on product-specific criteria.

4. Increase the general tolerance rule and include all HS chapters

The ‘de minimis’ or general tolerance rule stipulates a maximum percentage of illegitimate non-originating materials that can be used in production without affecting the origin of the final product. Therefore, by excluding a certain proportion of non-originating material from the product-specific origin rule, the tolerance rule makes it easier to satisfy rules of origin. The proportion that may be excluded is normally 7-15%. In the EU agreements, the tolerance rule is typically set at 10 or 15%, with an exception for textiles (chapters 50–63). In order to make the general tolerance rule less restrictive, it should be increased to at least 15% and include all HS chapters.

4.4 Anti-dumping regulation

As currently applied, EU anti-dumping investigations also favour import-competing interests over the EU user industry from a procedural point of view. Import-competing EU producers have ample time to prepare and motivate their complaint. By contrast, the user industry is exposed to narrow deadlines which make qualified contributions more difficult. In addition, many small and medium-sized enterprises do not possess the resources to take part in anti-dumping investigations, or to afford law firms. This prevents many companies from registering as interested parties and defending their economic interests and legal rights.

To address these imbalances (both economic and procedural) and to promote an application of the anti-dumping instrument that corresponds better with a 21st century business environment, the following policy options might be explored.

The economic imbalance - a more rigorous application of the Union interest test

- The European Commission might consider making quantitative assessments of the Union interest test, applying a standardised model that estimates the costs and benefits of a particular AD measure.
- This approach might also be used for the determination of the product scope and level of potential anti-dumping duties.
- A more rigorous application of the Union interest test might also include an estimation of EU value added in affected imports.

The procedural imbalance – allowing equal consideration to all economic interests

- A non-response from users and consumers should not be seen as an automatic approval of a proposed measure.
- Trade associations should be allowed to represent the user industry and fill in questionnaires.
- The Commission could take a more proactive approach and complement the information provided by users with relevant information compiled by Eurostat and other reliable sources.
- Contributions from stakeholders that are not interested parties in the legal sense of the term could be accepted, as well as new comments and information throughout the proceedings.
- Contributions in other forms, not just questionnaires, should be considered.
Notes

1 These five themes do not cover the full range of research on global value chains. One important area that is not covered is the debate on whether global value chains contributed to the contraction in global trade that followed the 2008/2009 financial crisis.

2 Ronald Coase received the Nobel Prize in economics in 1991 for, among other things, his work on the nature of the firm (1937) and the determinants of boundaries between tasks that are carried out within the firm and transactions that take place in the market place.

3 At least not among policy makers. It is probably an intuitive result for trade economists for the reasons mentioned above: While imports of input goods can affect firm productivity through several different channels, imports of final goods only improves productivity through increased competition.

4 Ironically, the EU recently won an important WTO dispute settlement case (WT/DS395/AB/R) that concerned Chinese export restrictions on raw materials. According to the Commission press release, many of these raw materials “are critical for EU industry [in the chemical, steel and non-ferrous metal sector]”.

5 The reason for this is that the price of inputs in the production of final goods is reduced whereas the price of final goods remains the same. The resulting increase in the price margin between inputs and the final product reduces competitive pressures on the producer of the final good. See, for example, Krugman and Obstfeldt (2005).

References


Jara, Alejandro (WTO), speech at the 2010 World Input-Output Database Conference. Available at: http://www.wto.org/english/news_e/news10_e/ devel_26may10_e.htm


