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Global Value Chains and Deep Preferential Trade Agreements

Promoting Trade at the Cost of Domestic Policy Autonomy?

Dominique Bruhn

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Bonn, August 2014 Dominique Bruhn

Abstract

This paper evaluates the role of preferential trade agreements (PTAs) in the context of global value chains. Given the interconnectedness of trade and investment, preferential trade agreements not only contribute to participation and value capture by eliminating traditional trade barriers, they also provide a framework for economic governance regulating behind-the-border policies. While this is an important device for ensuring commitment to creating a reliable business environment, deep trade agreements also tend to restrict policy autonomy. Governing global value chains by means of deep trade agreements is thus a double-edged sword.

Against this background, developing countries should carefully assess the pros and cons associated with PTA membership. In order to successfully reap the benefits, PTAs should be geared towards developing country needs by maintaining the flexibility necessary for developmental purposes. This will require negotiation skills on the part of developing countries as well as technical assistance for implementation on the part of developed countries. Moreover, given the increasingly global character of value chains, both developed and developing countries should pursue negotiations at the multilateral level in order to make optimal use of the opportunities created by global value chain trade.

By looking at deep PTAs, this paper combines the literature on regional integration with the new strand of global value chain research – without neglecting the traditional view on global value chains and development which stresses the role for complementary policies. The paper concludes by translating the findings into policy recommendations and pointing out gaps in the literature that should be addressed to better inform policy-makers.

Contents

Figures

Tables in the Appendix

Abbreviations

BIT	Bilateral Investment Treaty
DVA	Domestic Value Added
DVA3	Domestic Value Added embodied in third countries' exports
EU	European Union
EX	Gross Exports
FDI	Foreign Direct Investment
FVA	Foreign Value Added
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GTAP	Global Trade Analysis Project
GVC	Global Value Chain
IDE-JETRO	Institute of Developing Economies
IPR	International Property Rights
LDC	Least-Developed Country
MFN	Most Favoured Nation
OECD	Organisation for Economic Co-operation and Development
PTA	Preferential Trade Agreement
R&D	Research and Development
RTA	Regional Trade Agreement
SPS	Sanitary and Phytosanitary Measures
TBT	Technical Barriers to Trade
TiVA	Trade in Value Added
TRIMS	Trade-Related Investment Measures
UNCTAD	United Nations Conference on Trade and Development
VAE	Value-Added Exports
WIOD	World Input-Output Database
WTO	World Trade Organization

1 Introduction

The last decade was characterised by both the rising importance of global value chains (GVCs) in international trade and the parallel proliferation of preferential trade agreements (PTAs). Making a connection between the two phenomena seems paradoxical at first, since the global nature of value chains should encourage multilateral rather than bilateral or plurilateral negotiations (OECD 2013, 109). However, the strong nexus of trade and investment and the complex structure inherent in GVCs presents the World Trade Organization (WTO) with a serious institutional challenge and thus – especially in light of the slow progress of multilateral negotiations – gives rise to a *"demand for new forms of governance"* (IMF 2013). The rising importance of trade-related dimensions such as competition, investment and intellectual property rights, which are not sufficiently addressed at the multilateral level from a GVC perspective, reveals the lack of institutions, regulations and mechanisms to deal with such 'behind-the-border' issues. PTAs seem to be partly closing this gap in economic governance by including disciplines and commitments that go substantially further than the trade rules of the WTO.

For developing countries, the implications of deep PTAs in the context of GVCs are of particular interest. On the one hand, PTAs eliminate trade barriers and serve as a commitment device signalling policy transparency and predictability – both of which are associated with increased foreign direct investment and trading activity. On the other hand, the binding commitments in PTAs are often regarded as restricting policy-makers in their choice of supportive policies for development. If PTAs are indeed seen as a necessary way of governing global value chains, assessment of their impact on participation and value capture is essential.

During recent decades, opportunities for developing countries to participate in international trade have increased significantly. The fragmentation of production processes along the value chain, or 'vertical specialisation', has led to trade in final goods being increasingly substituted by *"trade in tasks"* (Grossman / Rossi-Hansberg 2008). Consequently, in order to become integrated into world trade, countries no longer need to be competitive in the production of final goods, but rather in certain tasks involved in the production process. This allows developing countries to industrialise by joining value chains, instead of building whole chains by themselves (Baldwin 2011). GVCs are said to play a *"catalytic role for development"* (UNCTAD 2013a) by providing access to networks, markets, capital, knowledge and technology (OECD 2013). Empirical analyses by the IMF (2013) show indeed that GVC participation is positively correlated with productivity gains and growth.

However, what ultimately matters is not only participation in GVCs, but the extent of value created in the export-related economy that effectively contributes to domestic job creation and growth (Banga 2014). Concerns are voiced that the share of domestic value added in exports is often limited in developing countries that specialise and remain trapped in low segments of the value chain or that rely on high proportions of imported content (UNCTAD 2013d). Eventually, productivity growth stemming predominantly from the narrowing of the technology gap between host and source country will slow down and domestic wages will adjust, eroding a country's comparative advantage. Hence, developing countries risk being caught in a *"middle-income trap"* or *"imitation trap"* (Agenor / Canuto 2012).

A country aiming at both increasing its participation in GVCs and improving its position in them will have to go beyond traditional trade policy. It must also address behind-the-border barriers that affect its attractiveness as a part of these chains. The emergence of GVCs and the consequent need for reforming behind-the-border regulations have therefore certainly contributed to the recent proliferation of deep PTAs. In many cases, PTA provisions go much further than the multilateral WTO rules in regulating not only trade between member states but also areas such as investment, industrial standards, competition policy, intellectual property rights, labour standards and environmental protection (Horn / Mavroidis / Sapir 2010).

The proliferation of deep PTAs brings opportunities as well as risks. On the one hand, PTAs take account of the growing importance of regional and global production networks and encourage further integration by eliminating tariffs and non-tariff barriers to trade and investment. Moreover, developing countries may benefit from a more stable and reliable trade and investment environment promoted through deep PTAs, which is necessary for upgrading along the value chain towards higher value-added tasks. On the other hand, the extensive coverage of behind-the-border regulations, affecting far more policy areas than just directly trade-related issues, can tie governments' hands when they are trying to pursue a national development strategy. For example, some PTAs include provisions on dispute settlement mechanisms that grant foreign investors the right to sue states before an international arbitration court and to demand significant compensation.

Making use of newly available data on decomposed trade flows and on the content of PTAs, this paper investigates the link between global value chains and preferential trade agreements. By assessing the trade-offs between deep integration and developmental space in relation to PTAs, it contributes to the literature by shedding light on what Dalle / Fossati / Lavopa (2013) call *"the missing piece in the GVC debate"*. The remainder of this paper is organised as follows. Section 2 gives a brief introduction to the measurement, concepts and indicators of value-added trade and presents some stylised facts with a particular focus on the role of developing countries in global value chains. Section 3 evaluates the role of preferential trade agreements in a global value chain context. Section 4 highlights the trade-offs associated with deep PTA provisions. Section 5 derives policy recommendations from the preceding analysis and identifies research gaps. Section 6 then outlines areas of future research. Section 7 concludes.

2 Trading value added: measurement and stylised facts

The importance of trade in parts and components relative to that of trade in final goods has been rising steadily – trade in intermediates now accounts for almost two-thirds of world trade (IMF 2013).This implies that a significant amount of goods crosses borders more than once. UNCTAD (2013d) estimates that in 2010, five trillion USD, representing more than 25% of global gross exports, was double-counted. In a world of global value chains, gross exports are therefore no longer sufficient for studying trade patterns as they mask the underlying structure and overstate export performance through multiple counting in the official statistics. Traditional trade statistics remain relevant as they describe the physical movement of goods across borders, but *"the concept of 'value added' is useful in order to understand where economic activity and jobs are generated"* (Miroudot / Yamano 2013).

Mattoo / Whang / Wei (2013) emphasise that the decomposition of gross trade into value-added measures can provide important insights regarding the implications of trade policy, global imbalances, exchange rate assessments, competitiveness and environmental issues.

This chapter gives an introduction to the measurement, concepts and indicators of trade in value added and provides some stylised facts about the role of developing countries in different dimensions of global value chains.

2.1 Measurement, concepts and indicators

With the rising importance of global value chain trade, scholars as well as policy-makers have acknowledged the need for more disaggregated trade data. Various initiatives have thus put enormous effort into disentangling the complex structure of trade. For the time being, the most widely used database is probably the World Input-Output Database (WIOD) constructed jointly by 11 research institutions led by the University of Tinbergen. Timmer (2012) provides a comprehensive overview of WIOD's contents, sources and methods for obtaining workable data. In a joint effort, the Organisation for Economic Co-operation and Development (OECD) and the WTO launched their Trade in Value Added (TiVA) database in January 2013, making value-added trade data readily accessible. In the meantime, UNCTAD is working on a GVC database that includes more developing countries than are covered by WIOD and TiVA. Further initiatives providing decomposed trade flows include the Global Trade Analysis (GTAP) project and the Asian International input-output tables generated by the Institute of Developing Economies (IDE-JETRO).

The different databases vary considerably with regard to countries, sectors and years covered. Most notably, while one approach is to deal with a small number of countries but many time periods (WIOD), another is to cover fewer different time periods but for more countries (OECD/WTO TiVA). Data availability is a major challenge in this regard. Compromising statistical rigour by using interpolation and estimation methods, the UNCTAD-Eora GVC database[1] is now attempting to make available a continuous dataset from 1990 to 2010 for more than 100 countries, including many developing countries.[2]

In order to construct indicators for trade in value added, the underlying structure of trade flows is evaluated. Accordingly, one needs to track products and services along the value chain within and between sectors and countries. As many products cross borders multiple times before reaching the final consumer, tracking these value chains is no trivial task. Moreover, trade statistics are rarely consistent across countries, so harmonisation is needed in order to construct a global inter-country input-output table. Obtaining a globally consistent database on gross and value-added trade flows therefore entails making assumptions, approximations and estimations.[3] Against this background, it is important to

1 The value-added trade data in UNCTAD's GVC database are derived from the Eora multi-region input-output (MRIO) tables.

2 For a more detailed overview of the existing databases see UNCTAD's 2013 *World Investment Report*, chapter 4, p. 124.

3 For a more detailed description of the steps to constructing value-added trade data, please refer to Timmer (2012) for WIOD and Miroudot / de Backer (2013) for OECD/WTO-TiVA.

keep in mind that measurement errors are difficult to avoid. Nevertheless, value-added trade data are much more informative in many respects than data on gross trade flows.

In the following paragraphs, the most important concepts and indicators for measuring different aspects of participation in global value chains will be introduced. The list is non-exhaustive, but sufficient for following the remainder of this paper.[4] In general, **gross exports** (EX) can be broken down into two components – **domestic value added** (DVA) and **foreign value added** (FVA). The relationship can thus simply be described by

$$EX = DVA + FVA \ .$$

Domestic value added is the content embodied in exports that directly contributes to value creation in the economy and thus to GDP. It is equal to the payments to the factors of production. **Foreign value added** is foreign content embodied in exports, i.e. raw materials or intermediate goods imported from partner countries for further exporting. Hummels / Ishii / Yi (2001) use FVA as an indicator for vertical specialisation, as it captures the extent of usage of foreign imported intermediates and proxies the integration into global production networks. Other indicators of interest are the share of domestic and foreign content in gross exports (i.e. DVA/EX and FVA/EX), because they measure to what extent domestic (or foreign) value added contributes to the total value of exports.

It is possible that not all the domestic content embodied in exports is absorbed by consumers in the importing partner country. Parts of domestic value added may travel further to third countries or return to the home country, being embodied in the exports of the partner country. The domestic value added embodied in third countries' exports (DVA3) is thus a subset of total domestic value added and crosses borders at least twice.

On the basis of the given concepts, Koopman et al. (2010) derive an indicator for global value chain participation: a country is well integrated into global production networks if it sources many inputs from abroad (downstream participation) and a large proportion of its own value added is part of third countries' exports (upstream participation), relative to its total exports, i.e.

$$GVC\ participation = \frac{FVA + DVA3}{EX} = \frac{FVA}{EX} + \frac{DVA3}{EX} \ .$$

The first component in the formula captures downstream participation and the second term upstream participation. Note that this definition of GVC participation extends the indicator for vertical specialisation introduced by Hummels / Ishii / Yi (2001) by the upstream component and is thus a more complete measure of participation in global value chains.

Johnson / Noguera (2012) propose an indicator for **value-added exports** (VA) which is defined as domestic value added embodied in foreign final demand. It captures the domestic value added reaching its final destination, i.e. the link to the end consumer. The

4 For a detailed breakdown of gross exports in a unified accounting framework, please refer to Koopman / Wang / Wei (2014) who decompose gross exports into nine 'buckets' subsumed under three main pillars – value-added exports, domestic content in intermediate exports that finally return home, and foreign content.

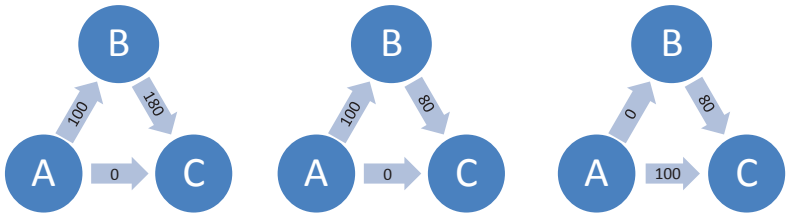
value added may well travel through additional production stages before reaching its destination. Hence, this measure differs conceptually from domestic value-added embodied in exports (DVA) which simply singles out the domestic content in direct exports and ignores the journey of value added across further borders. Value-added exports are thus further away from real trade flows: *"Value added is not directly traded: value-added exports are the result of how goods trade flows are combined and used across countries through the global input-output structure"* (Noguera 2012).

For clarification, Figure 1 illustrates the relationship between gross exports, domestic value added embodied in exports and domestic value added embodied in foreign final demand ('value-added exports'). Special attention should be given to the fact that domestic content embodied in exports is always a fraction of gross exports, while value-added exports can be positive even when no direct trade relationship exists. An example is the relationship between A and C in Figure 1.

Figure 1: Explaining the concepts of gross and value-added trade

Scenario:
Country A exports cocoa beans worth 100 USD to country B. Country B uses the cocoa beans to produce chocolate worth 180 USD which is then exported to country C. Consumers in country B do not like chocolate, so the whole produce is exported.

What do the gross and value added trade flows look like?



	EX Gross exports	DVA Domestic value added embodied in exports	VA Domestic value added embodied in foreign final demand („exports of value added")
A → B	100	100	0
B → C	180	80	80
A → C	0	0	100

Source: Author

On the basis of their definition of value-added exports, Johnson / Noguera (2012) define the VAX ratio as an additional indicator for the study of GVCs. VAX is the ratio of value-added exports over total exports given as

$$VAX = \frac{VA}{EX} .$$

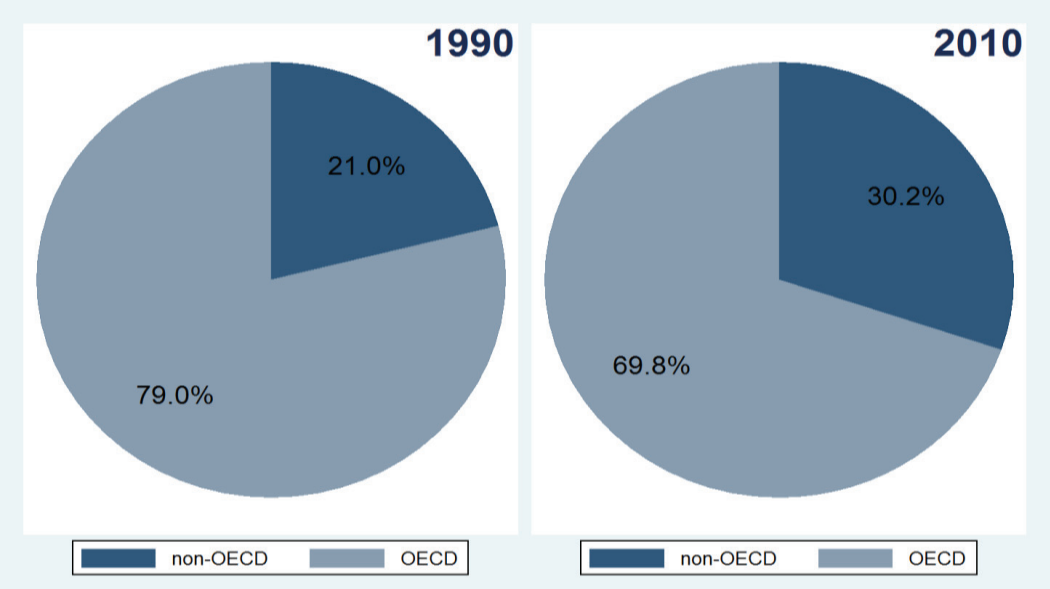
The VAX ratio can be interpreted as an alternative measure for the intensity of production-sharing or the domestic content of exports. A higher VAX ratio may also mean successful upgrading to higher value-added tasks or chains.

2.2 Facts and figures

Having introduced measures and indicators for trade in value added, this subsection will summarise the main findings of the GVC literature and illustrate some important patterns graphically – with a focus on participation and value capture by developing countries.

In general, over the past decades, non-OECD countries have increased both participation and value capture in global value chains. Figure 2 shows how the share of value-added trade of non-OECD countries relative to the world total increased from 21% in 1990 to 30.2% in 2010.[5] This is significant, as value-added trade makes up an important part of developing countries' GDP: 28% compared with 18% in developed countries in 2010 (UNCTAD 2013b). Using the OECD/WTO TiVA data, Banga (2014) estimates that of total value generated under GVCs, OECD countries contribute 67%, the BRICs and newly industrialised countries[6] 25%, and the remaining developing economies and least-developed countries (LDCs) only 8%. In sum, OECD countries still contribute the lion's share and the increase in non-OECD shares can to a large extent be traced back to emerging economies.

Figure 2: OECD and non-OECD shares of world trade in value added[a)]



Note: a) OECD in both pie charts comprises the 34 member countries of the OECD as of April 2014.

Source: UNCTAD-Eora GVC database

5 Value-added trade is here measured as the domestic value added embodied in exports, i.e. DVA.

6 BRICs: Brazil, Russia, India and China. Newly industrialised countries (as classified by Banga 2014): Chinese Taipei, Korea, Singapore, China, Hong Kong, Malaysia, Philippines, Thailand, Cambodia, Brunei Darussalam.

Both GVC participation and value capture are important targets for developing countries. While GVC participation and exports of value added are highly correlated (IMF 2013), increasing the share of domestic content in exports to augment value capture while increasing GVC participation still seems difficult. A country liberalising its trade and investment regime in order to encourage participation in GVCs will almost always experience an inflow of foreign intermediates, which increases the share of foreign content share in exports. Upgrading to higher value-added tasks is not automatic. Hence, there is a short-term trade-off between GVC participation and increasing the share of domestic content in exports (UNCTAD 2013d). Most developing countries follow this path, but still experience a positive contribution to GDP of their integration in GVCs (UNCTAD 2013d).

UNCTAD (2013d) shows that countries with higher growth in GVC participation achieve higher economic growth rates on average. The same is true for countries with higher growth in domestic content's share in exports. The most successful countries with regard to growth performance are characterised by high growth both in GVC participation and in domestic content's share in exports, e.g. China, Malaysia, the Philippines and Thailand.

2.2.1 Participation in GVCs

Participation in GVCs is a promising means for developing countries to become integrated into the international trading system. Because of the associated opportunities for economic development, it has become an important part of export-led growth strategies in many developing countries, particularly South East Asia (UNCTAD 2013a).

The existing literature has started to identify determinants that facilitate or hinder participation in GVCs. Owing to the strong nexus of trade and investment and the important role of transnational corporations in shaping global value chains, a strong driver of GVC participation is foreign direct investment (IMF 2013). Consequently, a more conducive business environment – as measured by the World Doing Business Index – is associated with higher GVC participation (UNCTAD 2013a). In general, lower trade costs facilitate integration into GVCs. Using a theoretical model, Grossman / Rossi-Hansberg (2008) show that improvements in communications technology – through lowering trade costs – result in a more globalised production process.

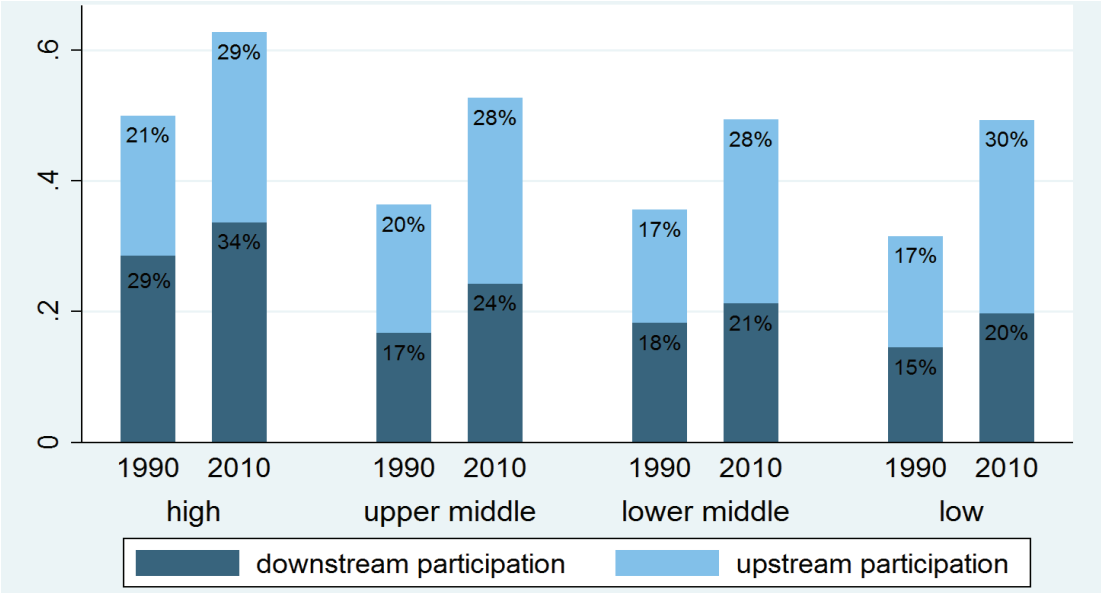
Moreover, small countries tend to be more integrated into GVCs because of their greater need for foreign inputs (downstream participation). The relationship is diluted, however, by the fact that large countries tend to supply many inputs used in third countries' exports (upstream participation), which also feeds into the participation index (Backer / Miroudot 2013).

Countries excluded from GVCs often share characteristics such as remoteness and lack of natural resources as well as a deficient infrastructure and business environment (OECD 2013, 10). Moreover, where intellectual property and investment rights are weak, foreign firms' know-how and capital are more exposed, reducing the incentive to locate parts of their supply chain in the country concerned (IMF 2013).

Figure 3 illustrates GVC participation by income category for the years 1990 and 2010.[7] Following the definition by Koopman et al. (2010) introduced in Section 2.1, GVC participation is measured by the extent of foreign inputs used in exports (downstream component) and the domestic value added used in third countries' exports (upstream component).[8] First, it is noteworthy that all income groups have experienced a strong increase in overall GVC participation in the last two decades. Second, the degree of GVC participation seems to be positively correlated with income. High-income countries are best integrated into global value chains, while low-income countries lag behind – although they are catching up.

Third, the graph allows conclusions to be drawn about the type of GVC participation. Downstream participation measures the extent to which foreign inputs are embodied in exports (FVA/EX). Upstream participation indicates the share of domestic inputs used in third countries' exports relative to total exports (DVA3/EX). Note that most of the growth in GVC participation in low-income countries stems from upstream participation, presumably from increased exports of natural resources and raw materials. Upstream participation and providing core inputs for production is a good thing in general, but the low growth in downstream participation indicates that many low-income countries still struggle to gain access to GVCs beyond their initial starting point (UNCTAD 2013d).

Figure 3: GVC participation by income category



Source: UNCTAD-Eora GVC database

Moreover, many developing countries' participation in GVCs is limited to supplying developed countries' markets – East and South East Asia, where South–South networks

7 The most recent World Bank classification, 2014, is used for Figures 3 and 4. Please refer to the Appendix for a list of countries included in each income group.

8 The downstream component therefore measures the extent to which a country A uses B's intermediate products in its exports. The upstream components measures how much of A's exports to B is used as an intermediate input for B's exports to C.

are gaining increasing importance, being an exception (UNCTAD 2013a). Baldwin / Lopez-Gonzalez (2013) capture this asymmetry by distinguishing between *"factory economies"* and *"headquarter economies"*. Another concern is that GVC participation, often limited to the low value-added segments and involving a high proportion of foreign content, does not contribute sufficiently to local value capture and income-generation (UNCTAD 2013d). Besides GVC participation, it is therefore also relevant to further assess which position countries occupy in GVCs and how much value they capture from their trading activities.

2.2.2 Value capture in GVCs

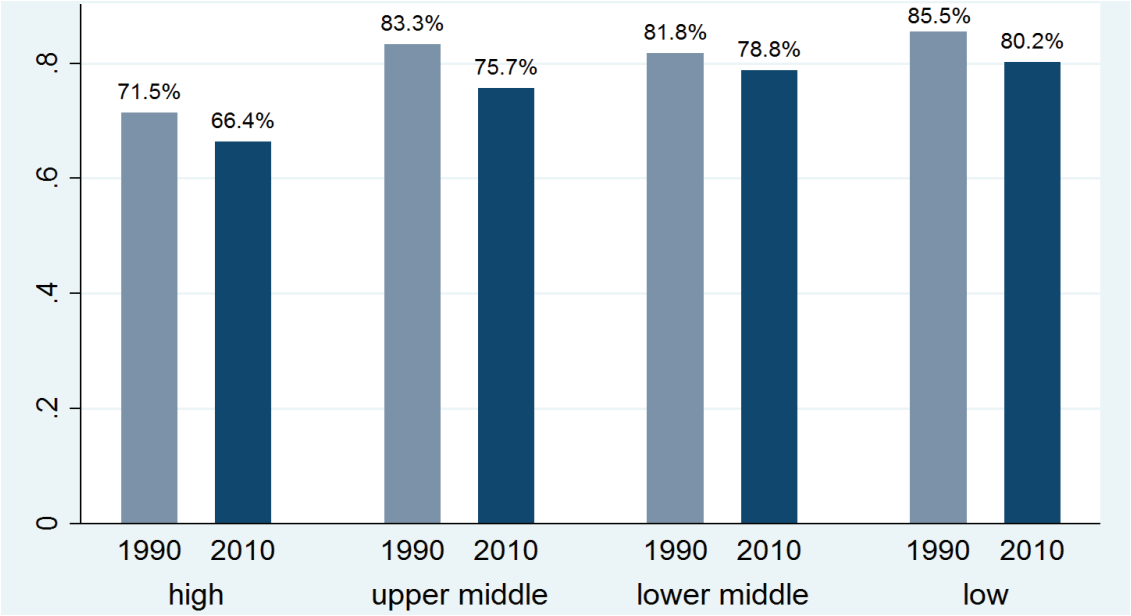
Value capture can be measured either by the share of domestic content in gross exports (DVA/EX) or by the ratio of value-added exports to total exports (VAX ratio). From a global perspective, the VAX ratio declined by approximately ten percentage points between 1970 and 2010, and the rate of decline accelerated over time (Johnson / Noguera 2012). This illustrates the extent of production-sharing, with many products crossing borders multiple times. However, there is significant heterogeneity across countries and sectors. Two general patterns emerge:

1) *Position in the value chain*
   The VAX ratio tends to be low for countries participating in the assembly part of GVCs and high for countries providing 'core' inputs of final products (IMF 2013). This includes raw materials and *"intangible or knowledge based assets"* that are hard to imitate or reproduce, such as research and design (OECD 2013, 217).
2) *Export composition*
   The VAX ratio is high for agriculture, natural resources and services, but low for the manufacturing sector (Johnson / Noguera 2012). If a large share of a country's exports is attributable to only one sector, this has repercussions on the country's aggregate VAX ratio.

It thus seems that a country's composition of exports and its specific task and position in the value chain – rather than the level of income – predict its aggregate VAX ratio and/or the share of domestic content in exports. For example, developed countries often have a large manufacturing share in their exports, which tends to reduce their VAX ratio. Nevertheless, they occupy higher value-added segments within the manufacturing sector, which tends to increase their VAX ratio (Johnson / Noguera 2012).

Figure 4 illustrates the share of domestic content in exports (DVA/EX) by income category. First, the domestic content share has decreased over time in all income groups. This is due to the above argument that rising GVC participation increases production-sharing and the use of foreign content in exports. Second, it seems that low-income countries have the largest domestic content share in their exports.

Figure 4: Domestic content share in exports by income category



Source: UNCTAD-Eora GVC database

There are two possible explanations for the relatively large share of domestic content in low-income countries' exports: (i) the small share that domestic content accounts for in high-income countries' exports may stem from the fact that this income category is to a large extent made up of EU countries with an above-average level of production-sharing, i.e. an extremely high amount of border crossings of intermediate inputs and foreign content in exports; (ii) the results may be driven by the fact that low-income countries are often exporters of natural resources and raw materials (pattern 2) and are not necessarily an indication of developing countries occupying higher value-added positions in the value chain (pattern 1).

Lead firms are often reluctant to outsource core competencies, aiming to keep control over high value-added segments of their supply chain (UNCTAD 2013a). Especially for knowledge-intensive products, the reliability of suppliers is very important. As a supply chain is only as strong as its weakest component, many developing countries are locked in low-value-added segments with shorter and less technology-intensive chains (UNCTAD 2013a).

The position that a country needs to occupy in order to capture value may differ across industries and value chains (OECD 2013), making it a difficult target for policy-makers in developing countries. There is consensus, however, that some factors contribute to the capture and upgrading of value along the chain, such as a favourable business climate, sound behind-the-border policies, infrastructure, education and training, protection of intellectual property rights, quality control, and contract enforcement (OECD 2013, 10 ; Dean 2013).

3 Evaluating the role of PTAs: deep provisions for global value chain trade

On the basis of the findings described in Chapter 2, Section 3.1 outlines the general implications of tariff and non-tariff barriers in GVCs, highlighting the important contribution of PTAs to developing country participation and value capture. Section 3.2 then looks at the most common deep PTA provisions in detail. Finally, Section 3.3 reviews the empirical evidence on the relationship between preferential trade agreements, trade and investment, with a particular focus on GVCs.

3.1 Implications of tariff and non-tariff barriers in GVCs

In a world of global value chains, traditional trade policy has to be thoroughly reassessed. Since goods cross borders multiple times, even small tariffs can add up to significant trade cost. This magnification effect is reinforced by the fact that tariffs are applied to gross imports, not only to their value-added part, meaning that the direct exporter may be taxed for parts that it has not produced itself. Koopman et al. (2010) state that especially developing countries tend to be harmed by the magnification effect, because in these countries tariffs on intermediate imports are higher on average than in developed countries. This is particularly true for many Asian countries which typically also have a high share of foreign content in their exports.

Tariff barriers not only become more expensive, they also become more harmful in that they jeopardise the domestic comparative advantage. Whether a firm is competitive enough to export hinges to a significant extent on its ability to source inputs cheaply (OECD 2013, 150). With trade in final goods, tariffs harm consumers by increasing prices but protect domestic producers. In a GVC setting, producers are also negatively affected since tariffs erode their competitiveness. Hence, tariffs are no longer just 'beggar-your-neighbour' but 'beggar thyself' policies (Miroudot / Yamano 2013). The 'thicker' that national borders are, the more complicated and costly the international sourcing of inputs (OECD 2013, 41).

The IMF (2013) shows empirically that the overall trade restrictiveness of a country is negatively related to value-added exports. In light of the above issues, GVCs could be seen as a *"new argument for trade liberalization"* (OECD 2013, 88). Indeed, recent research highlights the role of production fragmentation on limiting the use of tariffs on parts and components as well as other protectionist measures (IMF 2013). Baldwin / Lopez-Gonzalez (2013) show a sharp drop in applied tariffs (especially on intermediates) in developing countries since the 1990s, which can be interpreted as a unilateral effort to facilitate integration into global value chains.

Non-tariff barriers are equally harmful for participation in GVCs. In fact, estimates suggest that the trade gains from smoother border procedures are higher than those from tariff reductions (UNCTAD 2013d). The negative consequences of costly and lengthy customs procedures at every border crossing is rendered even greater by the magnification effect. The trade facilitation package agreed on in Bali in December 2013 is therefore of great importance to the integration of developing countries in global value chains.

Besides 'thick' borders, behind-the-border policies can also have a significant impact on GVC participation. Whether a country is included in a firm's supply chain often depends on a trade-off between direct and indirect costs. In many cases, the *"ability to move goods continuously, safely and economically"* is a more decisive factor than labour costs (UNCTAD 2013a). In that sense, the institutional framework is of utmost importance for attracting investments. UNCTAD (2013a) estimates that an improvement in government effectiveness in low-income countries to the level of that in middle-income countries would increase exports of intermediates by almost 50%. To give an example, the enforcement of contracts and intellectual property rights plays a crucial role, especially when products are characterised by a large share of research and development (R&D) or intellectual property involved in their content (Dean 2013). Although research and design tasks are usually not carried out in developing countries, the mere fact that knowledge-intensive products may be shipped for assembly to countries with a weak regulatory framework may invoke the need for additional regulations.

Given the strong nexus of trade and investment in global value chains, whether a country is included in GVCs hinges not only on trade policy, but also on the regulations regarding foreign direct investment. Most of global value chain trade is generated through transnational corporations (UNCTAD 2013d). Providing a sound business environment and removing barriers for foreign firms can therefore represent strong incentives. Moreover, many investments and contractual relationships are long-term, making government transparency and policy reliability important factors.

In sum, the importance of global value chains implies that tariff and non-tariff barriers to trade matter a great deal – especially for integrating developing countries into the chains. According to Baldwin (2012), "*protectionism is destructionism as far as developing nations are concerned*". Traditional trade policies can backfire by undermining comparative advantages. Moreover, the interdependence of trade and investments makes dimensions such as the institutional quality, government transparency, the investment framework, intellectual property rights and contract enforcement more important. One means of addressing tariffs as well as behind-the-border issues underpinning global value chain trade is the signing of deep preferential trade agreements.

3.2 The proliferation of deep provisions in trade agreements

Many preferential trade agreements concluded in the past decade differ from their predecessors in two dimensions.

Horizontal dimension: Recent PTAs tend to have a larger scope in that they include topics beyond directly trade-related issues. Horn / Mavroidis / Sapir (2010) refer to these types of provisions as WTO-X dimensions, as previously they were only negotiated outside the WTO. Examples of WTO-X dimensions include investment, competition, environment, health, human rights, etc.

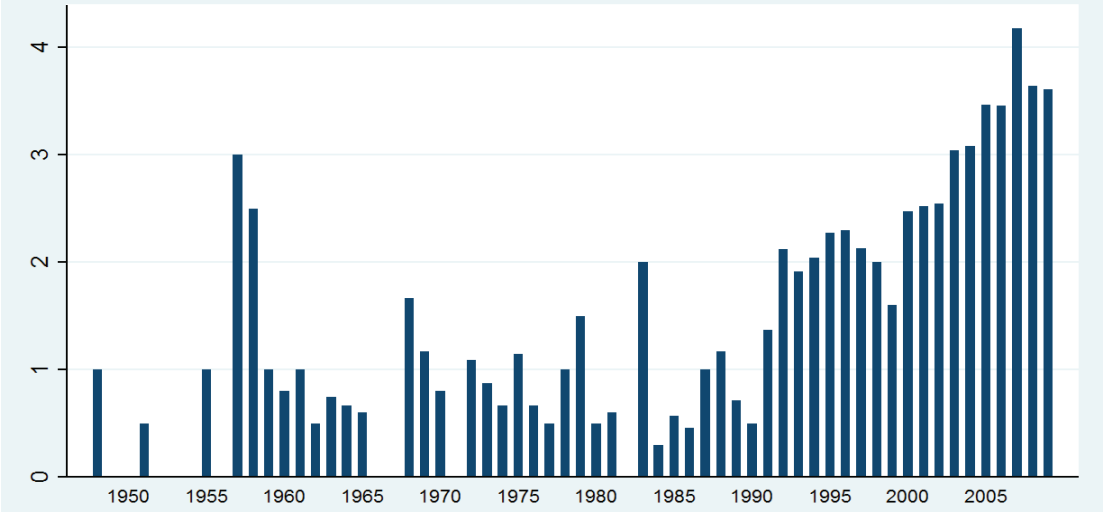
Vertical dimension: In addition to the horizontal dimension, many PTAs demand much larger commitments in the 'traditional' provisions – often beyond what was negotiated at the multilateral level. Horn / Mavroidis / Sapir (2010) refer to these provisions, which do appear in multilateral agreements but tend to be much stronger in PTAs, as WTO+

provisions. Trade-related investment measures, trade-related intellectual property rights, services, public procurement and anti-dumping are examples of WTO+ provisions.[9]

Figure 5 draws on the depth indicator from a new database on the design of trade agreements introduced by Dür / Baccini / Elsig (2014) covering roughly 600 PTAs concluded between 1948 and 2009. It ranges from 0 to 7 and measures whether a substantive provision in the following areas is included in the trade agreement: elimination of tariffs, services trade, investments, standards, public procurement, competition and intellectual property rights. A deep agreement covers many of these areas in a substantive way, while a shallow one mentions them only briefly or not at all.

A glance at Figure 5 reveals the fact that preferential trade agreements have become deeper over time. This trend is especially striking from 1990 onwards. The spike at 1957 can be explained by the foundation of the European Community, which at that time covered a comparatively large number of areas in a substantive way.

Figure 5: Average depth of trade agreements (concluded 1948-2009)



Source: DESTA database

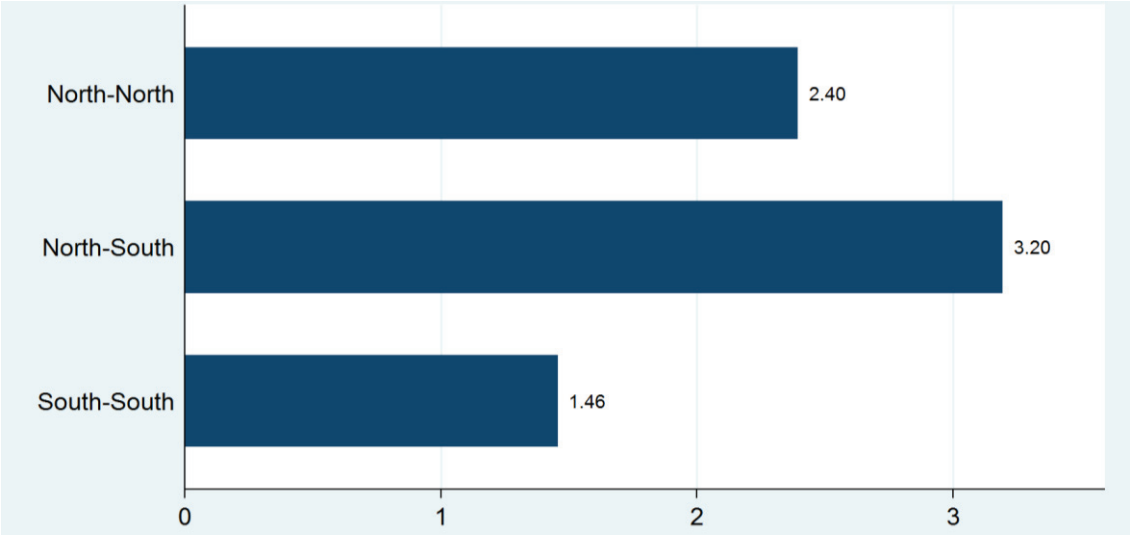
Furthermore, agreements between developed and developing countries (referred to as 'North–South' for convenience) are substantially deeper on average. This is reflected in Figure 6.[10] It thus seems that asymmetry regarding the level of economic development between countries plays a role in the design of the trade agreement. In comparison, the average depth of North–North agreements is notably lower. Developing countries, between each other, also seem to prefer shallow agreements that cover on average only 1–2

9 A complete list of WTO+ and WTO-X provisions as classified by Horn / Mavroidis / Sapir (2010) can be found in the Appendix.

10 The category 'North' includes the countries classified by UNCTAD as 'developed': Australia, Austria, Belgium, Bermuda, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States.

substantive provisions, focusing on the elimination of tariffs. These findings are in line with the stylised facts presented in the World Trade Report 2011 (UNCTAD 2011). Based on a sample of roughly 100 PTAs notified to the WTO, the report illustrates that the total number of provisions covered is highest for PTAs between developed and developing countries. Horn / Mavroidis / Sapir (2010), however, find a significant amount of 'legal inflation' in EU agreements, meaning that many policy areas are covered but a large number of the provisions are not legally enforceable.

Figure 6: Average depth by category



Source: DESTA database

A possible explanation for the depth of North–South agreements is the bargaining power of developed countries that offer valuable market access in return for concessions regarding PTA contents. Manger (2009) further argues that the design of North-South agreements reflects developed countries' aim to gain and secure preferential access to low-cost production sites in their supply chains by signing PTAs, locking out third-country firms and thus 'investing in protection' that grants them a competitive advantage.[11]

Given the discussion in Section 3.1 and the graphic illustrations, the role played by deep trade agreements becomes clear. First, they eliminate tariffs between the signing partners – removing the magnification effects and repercussions on domestic competitiveness that arise in a global value chain context. Second, deep PTAs act as a signalling and commitment device that can remedy local institutional deficiencies: *"The 'deep RTA'*[12] *alters South's domestic policy environment in a way that makes it safe for North high-tech firms to apply their know-how in South"* (Baldwin 2013).

11 See Manger (2009) for a more detailed explanation of his argument.

12 The term 'preferential trade agreement' used in this paper encompasses any agreement not concluded at the multilateral level which grants preferential treatment to the signing parties, e.g. bilateral and regional agreements. Baldwin refers to the same group of agreements but defines them as regional trade agreements (RTAs).

As global value chains touch on a large range of policy areas, many areas covered in deep PTAs may be relevant for global value chain governance and affect the decision of a firm to offshore or outsource a certain task to a developing country. The remainder of this section will briefly introduce the seven major areas covered by the depth indicator used above: (i) elimination of tariffs, (ii) services trade, (iii) investments (plus trade-related investment measures), (iv) standards, (v) public procurement, (vi) competition and (vii) intellectual property rights.

(i) Elimination of tariffs

The elimination of tariffs features not only in deep PTAs, but also in shallow ones, as it is the main aspect of trade liberalisation. In principle, the differentiated treatment discriminating between members and non-members of the PTA violates the WTO's most-favoured-nation (MFN) principle. Article XXIV in the General Agreement on Tariffs and Trade (GATT) grants an exception on condition that PTAs liberalise *"substantially all trade"* and aim at trade creation rather than trade diversion. Against this background, PTAs provide an opportunity to eliminate tariffs in sensitive areas where the WTO members cannot find a consensus on a multilateral level, for example in agriculture/fisheries (Horn / Mavroidis / Sapir 2009, Appendix A). However, most countries are reluctant to liberalise in PTAs what they aim to protect in multilateral negotiations: 66% of tariff lines in the 'sensitive' sectors with MFN rates above 15 percentage points remain at the same level in PTAs (UNCTAD 2011).

(ii) Services trade

On the multilateral level, services are regulated in the General Agreement on Trade in Services (GATS). Services play a significant role in the context of global value chains. First, more than 60% of foreign direct investment (FDI) around the globe is allocated to services (UNCTAD 2013b). Second, more than 70% of imported services are intermediate services (Backer / Miroudot 2013). Third, 40–45% of the value of exports is attributable to services, e.g. R&D, design, intermediation, transport and logistics, financial services, etc. (Hoekman 2014), making them an essential factor for value creation and value capture along the chain. Because of the lack of progress in the WTO, a group of 21 countries, the 'really good friends of services' which account for almost two-thirds of global services trade, is pushing forward to liberalise services beyond the WTO's GATS on a plurilateral basis. Of PTAs notified to the WTO, 28% include a services chapter (Mattoo / Sauvé 2011). Most of them share disciplines on transparency, most-favoured-nation and national treatment as well as regulations for monopoly service providers (Mattoo / Sauvé 2011).

(iii) Investment and trade-related investment measures

FDI stocks have risen more than six-fold since 1990, clearly outpacing the growth in international trade (Hoekman 2014), making the need for an investment framework evident. While the WTO covers investment only marginally, thousands of international investment agreements have emerged (UNCTAD 2013d). Given the strong linkage of trade and investment in global value chains, trade and investment policies should be coherent, which suggests bringing the complex system under one roof in the form of deep PTAs. As a matter of fact, since the turn of the century we have seen the number of newly

concluded bilateral investment treaties (BITs) falling while the inclusion of investment chapters in PTAs has been gaining momentum (Miroudot 2011).[13] Both EU and US agreements contain legally enforceable obligations in the investment area (Horn / Mavroidis / Sapir 2010).

Full investment chapters in PTAs contain provisions on market access and establishment, non-discrimination, investment regulation and protection, cooperation and promotion of investments as well as dispute settlement mechanisms (Miroudot 2011). Such investment rules have no equivalent at the multilateral level.

The WTO touches on the topic of investment in the Agreement on Trade-Related Investment Measures (TRIMS) – which are measures that affect foreign investors' trade performance. Two types of trade-related investment measures are prohibited under the TRIMS agreement: local content requirements and quantitative export restrictions. Local content requirements oblige foreign investors to source a certain proportion of inputs domestically. Export restrictions on raw materials, for example, restrict the amount of exports. Many PTAs concluded after the Uruguay Round contain TRIMS provisions going beyond the WTO regulations (UNCTAD 2013d). An example is the use of export taxes, which are not explicitly prohibited under the WTO, as they are not quantitative restrictions. However, they do form part of some PTAs: The US has included legally enforceable provisions prohibiting export taxes in some trade agreements with the South, e.g. US–Chile and US–Morocco (Horn / Mavroidis / Sapir 2009, Appendix A).

(iv) Standards

Standards in international trade can be classified broadly into product and process standards, which cover regulations in the quality, environmental and social dimensions. Product standards relate to the characteristics of the product, while process standards regulate the context in which it is produced. In WTO regulations, standards are referred to only in the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the Agreement on Technical Barriers to Trade (TBT), which were negotiated during the Uruguay Round to enforce standards related to food safety and health, and technical regulations and certification, respectively. However, *"the WTO agreements do not force countries to adopt standards, but they do provide disciplines to be adopted when applying standards"* (Maur / Shepherd 2011). PTAs often include more and stronger provisions on product and process standards. For example, they put greater emphasis on the implementation and enforcement of standards, sometimes even including dispute settlement mechanisms (Maur / Shepherd 2011). Budetta / Piermartini (2009) analyse 70 PTAs, 58 of them covering standards. They find that the EU commonly demands *harmonisation* with EU standards, especially in agreements with less-developed countries, which means that the trading partner must conform with the given EU standards. Other forms of dealing with standards in PTAs include *mutual recognition* (standards are accepted as different, but mutually recognised) and *equivalence* (standards are considered equivalent).

13 Complementary explanations for the fall in the number of newly signed BITs are (i) the fact that many BITs have already been concluded and (ii) there has been a rising number of Investor–State Dispute Settlement (ISDS) cases that have revealed the risk associated with BITs.

(v) Public procurement

In the WTO, the only binding agreement on public procurement is the plurilateral Agreement on Government Procurement, which applies a positive list approach.[14] This means that only a subset of member countries is part of the agreement (plurilateral), but the 40 signing parties are bound by the thresholds agreed upon in the selected areas of procurement (positive list). Out of all PTAs notified to the WTO since 2000, 63% include provisions on public procurement – many of them using a negative list approach, signalling greater ambition for liberalisation and more restrictive commitments (Dawar / Evenett 2011, Figure 17.1). Often these provisions try to establish efficiency and non-discrimination in public procurement (Dawar / Evenett 2011). Efficiency targets increase competition to reduce prices and save costs. An example of non-discrimination is the prohibition of local content requirements in public procurement (similar to the TRIMS provision above).

(vi) Competition

Competition policy aims at preventing anti-competitive behaviour arising from excessive market power. Against the background of global value chain trade, and companies operating in several markets, jurisdiction and enforcement become more complex, and transnational regulatory cooperation regarding competition plays a more important role (Dawar / Holmes 2011). So far, the WTO regulates competition issues only implicitly and in a non-binding way (Horn / Mavroidis / Sapir 2009, Appendix A). Efforts to build a multilateral competition regime have stalled; however, competition provisions repeatedly feature in PTAs (Dawar / Holmes 2011). Legally enforceable provisions on competition are present in most EU agreements evaluated by Horn / Mavroidis / Sapir (2009, Appendix B), in contrast to US agreements.

(vii) Intellectual property rights

Intellectual property protection in the form of patents, trademarks, copyrights, etc. aims at encouraging innovation. The exclusive rights granted by intellectual property rights (IPRs) serve as a means of offsetting the upfront cost associated with investments in research and development (R&D). Global value chains and the associated fragmentation of production imply that products with a sizeable R&D content may pass through developing countries on their way to the end consumer, for example for assembly purposes.

Intellectual property rights are regulated in the WTO by means of the TRIPS agreement. Nevertheless, many PTAs, notably those concluded by the EU and US with third parties, refer to international IP conventions that go beyond the TRIPS obligations (see Horn / Mavroidis / Sapir 2009, Appendix B, for a detailed list of international IP conventions referred to in EU and US agreements).

14 Positive list approach: the agreement only applies to procurements explicitly listed in the annexes of the WTO Government Procurement Agreement. Negative list approach: all items are included unless explicitly exempted from the agreement.

The bottom line of this section is that there is a notable shift from basic multilateral rules towards extensive regulations in preferential trade agreements. Antràs / Staiger (2012), who conduct a theoretical analysis of the role of trade agreements in the context of offshoring[15], argue that

> *"as the prevalence of offshoring rises, effective trade agreements and the institutions that support them will have to evolve, from a market access focus toward a focus on deep integration, and from a reliance on simple and broadly-applied rules, such as reciprocity and non-discrimination that guide the member-governments in their negotiations and shape their agreements, toward a collection of more-individualized agreements that can better reflect member-specific idiosyncratic needs."*

In sum, PTAs are used as a means of underpinning global value chain trade. In the following sections this paper will shed more light on their implication for trade flows and domestic policy autonomy.

3.3 Empirical evidence: PTAs, value chain trade and investment

This section aims to shed light on the impact of PTAs on their members' trade flows – and value chain trade in particular. The literature on the effects of trade agreements on international trade flows is vast (see UNCTAD 2011, section C.2, or Baier / Bergstrand 2007 for a review). Early attempts to empirically identify the effects have struggled to draw clear conclusions, owing to methodological challenges such as reverse causality, unobserved heterogeneity, multilateral resistance and zeros in the matrix of bilateral trade flows. Most noteworthy, Baier / Bergstrand (2007) and Egger et al. (2011) made important contributions to the empirical literature by mitigating these problems and advancing to identifying causal effects. They found a significant and positive impact of PTAs on members' trade flows.

However, PTAs have mostly been treated as a 'black box': for estimating the effect of a PTA on trade, it was common to use a dummy variable taking the value 1 if an agreement existed between a country pair and 0 otherwise. This strategy was improved by distinguishing the type of trade agreement according to a set of broad categories, e.g. free trade agreement, customs union, etc. Just recently, researchers have succeeded in shedding further light on the contents of PTAs and their effects on trade: for example, using their newly generated database on the design of PTAs, Dür / Baccini / Elsig (2014) find that behind-the-border provisions matter for trade flows and that deep agreements thus have a much greater effect than shallow ones.

The recent literature on global value chain trade also considers to a certain extent the heterogeneity of PTAs. Orefice / Rocha (2013) find an increase in production network trade of almost 12 percentage points when taking into account the depth of the trade agreement. They also find that the average impact of deep PTAs has gained relevance over time, which could be linked to the growing importance of global value chains. Using the number of provisions covered to measure the depth of an agreement, UNCTAD (2011)

15 Offshoring means relocating certain production activities abroad. In this sense, it is similar to the notion of production fragmentation within value chains.

finds that countries signing deeper agreements trade more than those signing shallow ones. More precisely, an additional provision covered in the PTA increases trade in parts and components by roughly 2 percentage points on average.

Noguera (2012) and Johnson / Noguera (2014) estimate a gravity equation for bilateral value-added trade flows based on their definition as described in Section 2.1 (VA). They find that a PTA increases bilateral gross trade flows more strongly than value-added trade flows. This is quite intuitive as the elimination of trade costs encourages multiple border crossings and thus makes trade with intermediates more attractive. Multiple border crossings, however, are counted only once in the value-added measure, so value-added trade is less affected. In numbers, adopting a trade agreement increases gross trade by 23% and trade in value added by 15% within the subsequent five years (Noguera 2012). The fact that gross trade increases more strongly than value-added trade leads to a decrease in the aggregate VAX ratio by 5–10% on average. The decline is larger for deep agreements than for shallow ones (Johnson / Noguera 2014). It should be emphasised, however, that a PTA leads to increases not only in the exchange of goods, but also in value creation in the domestic economy, as reflected by the 15% growth in value-added trade flows.

A finding specific to trade in the context of global value chains is the impact of trade cost with regard to third countries. In cases where goods travel through a third country C, exports of value added from country A to country B are also positively affected when A signs an agreement with C, and B signs an agreement with C (see Figure 1 for an example of tracing value-added exports). *"By participating in a global production chain, the source country increases value-added trade flows to the destination indirectly by increasing integration with other partners that belong to this chain."* This third-country effect is larger for deep agreements and has increased over time with the rising fragmentation of production (Noguera 2012).

Given the strong trade-investment nexus inherent in global value chains, the literature on the effect of (deep) PTAs on FDI can also give relevant insights. The evidence is generally mixed. Recent, more sophisticated studies have improved on the methodology, e.g. by describing the extent of investment liberalisation in PTAs more precisely and/or taking into account endogeneity issues, leading to more clear-cut, mostly positive results (see, for example, Dee / Gali 2005, Lesher / Miroudot 2007, Baltagi / Egger / Pfaffermayr 2008, Büthe / Milner 2008, Büge 2011, Medvedev 2012, Büthe / Milner 2014). Berger et al. (2013) differentiate between the various types of investment provisions and find a positive impact on investment for market access provisions in PTAs, but not in the case of BITs. It seems that PTAs that include investment provisions have a stronger impact on foreign direct investment than BITs (Lesher / Miroudot (2007).[16] A possible explanation is that investors are attracted by the whole set of rules offered by PTAs that regulate not only investment but also other trade- and investment-related policies. This is in line with the

16 The econometric evidence regarding the effect of BITs on investment is also mixed and may vary with the estimation technique used (Yackee 2009; see, for example, Hallward-Driemeier 2003, Aisbett 2007). Most recent analyses have resulted in the identification of a significant and positive relationship (Tobin / Rose-Ackerman 2011, Busse / Königer / Nunnenkamp 2010, Egger / Merlo 2007, Gallagher / Birch 2006, Neumayer / Spess 2005, Egger / Pfaffermayr 2004). Findings from surveys, however, suggest that foreign investors rarely base their investment decisions on whether or not a BIT has been concluded with the respective country (Yackee 2010).

argument that PTAs can provide an economic governance framework that is attractive for actors in global value chains.

As a last note, it should be kept in mind that the argument also goes the other way round – namely that the extent and type of trade determines the design of PTAs. Referring to evidence based on primary data, UNESCAP (2011) argues that in Asia PTAs are not a main driving force of production networks, but rather that the emergence of production networks due to market initiatives has encouraged and shaped the formation of trade agreements in the region. This is in line with the finding by the OECD (2013, 109) that the correlation coefficients between the network trade index and PTA index is highest for Asia and Oceania, which signed agreements with their main vertical trade partners. Orefice / Rocha (2013), Damuri (2012) and UNCTAD (2011) also show that an increase in production network trade between member countries leads to a deeper trade agreement. This effect is stronger for countries with different income levels. The authors interpret this finding as evidence for the need to fill the governance gap arising from the lack of appropriate institutions, rules and mechanisms for regulating trade within global value chains. In sum, the evidence on the relationship between global value chains and preferential trade agreements suggests that causality goes in both directions. *"The pattern of deep agreements is shaping and is shaped by global value chains"* (IMF 2013).

4 Balancing the trade-offs: policy implications of deep PTAs

The preceding analysis has shown that the growth in global value chain trade and the proliferation of deep preferential trade agreements are highly interconnected. In order to allow an assessment of this development, this chapter will introduce the objectives of developing countries in the GVC context and investigate the implications of deep PTA provisions with regard to these objectives.

4.1 Developing country objectives in GVCs

As argued above, the design of deep preferential trade agreements is very likely to improve participation in global value chains and increase trade flows for the signing parties by eliminating tariff and non-tariff barriers to trade. In particular, developing countries with a weaker domestic regulatory environment can benefit from deep provisions in PTAs bolstering insufficient domestic regulations. Nevertheless, deep PTAs also encompass risks.

Objective 1: Participating in global value chains

While GVC participation is worth striving for, the use of accompanying policies that increase value capture at the national level should also be given some thought.

> *"The mere participation in GVCs does not a priori imply a positive aspect for a country's economic development prospects. In order for such participation to be effective, complementary policies that allow domestic companies to climb up the links of the chain may be appropriate, thus making it easier to reap the potential benefits from integration into GVCs. In other words,*

> *upgrading should allow developing countries to move away from lower value-added activities, in which competitiveness solely depends on the costs and the barriers to entry are low"* (Dalle / Fossati / Lavopa 2013).

Governments in developing countries may thus have an incentive to use behind-the-border measures to *"maximise value capture at the national level in order to address developmental objectives such as better living standards, higher productivity, the deployment of new technologies, increased employment opportunities, and more diversified and resilient economies"* (Low / Tijaja 2013). GVC participation alone may not contribute sufficiently to income generation and could lock developing countries in low value-added segments, i.e. induce 'thin' industrialisation (UNCTAD 2013c, 177).

Objective 2: Capturing value in global value chains

Section 3.1 has stressed the importance of the elimination of tariff and non-tariff barriers for integration in GVCs. However, *"domestic (economic) policies largely determine which position countries occupy in GVCs and thus what value they are able to create and capture"* (OECD 2013, 43). Accordingly, industrial policy and other means of supporting domestic development are increasingly on the agenda of policy-makers and the subject of an evolving debate (Gereffi / Sturgeon 2013). Ravenhill (2014) criticises the new value chain literature for its promotion of trade and investment liberalisation, while neglecting the role that industrial policy plays in avoiding the middle-income trap. He argues that liberalisation may be sufficient for participation, but insufficient for upgrading in global value chains, i.e. moving towards higher value-added tasks.

Objective 3: Retaining autonomy over domestic policy decisions

While WTO regulations still leave sufficient room for manoeuvre, preferential trade agreements intensify the developmental trade-off between market access and policy space (Page 2007, Shadlen 2005a): signing a PTA is likely to reduce the range of policy instruments available to developing countries for supporting their development strategies. Whether doing so is a good thing from a development perspective is therefore controversial. Shadlen (2005a) concludes:

> *"To the extent that the regional-bilateral strategy entails the sacrifice of instruments that could potentially be used to transform higher levels of trade and investment into higher levels of domestic industrial development, the price of more stable and preferential market access may be excessive."*

There is thus a clear trade-off between trade and industrial policy objectives: signing a PTA to promote participation in global value chains may come at the cost of domestic policy autonomy. Whether participation is enough for capturing value and promoting economic development, or whether supportive domestic policy is needed, is not clear a priori. A combined objective therefore ought to be the ability to maintain, use and enlarge policy space without having to *"opt out of international commitments"* (Mayer 2009).

4.2 The ambivalence of deep PTA provisions

This section will describe in more detail why developing countries may benefit from including certain provisions in their trade agreements, and what repercussions there might be with regard to policy space. Resuming the discussion in Section 3.2, each provision is assessed with regard to the opportunities and risks involved.

(i) Elimination of tariffs

The elimination of tariffs is the most basic objective of trade agreements and thus not new to deep PTAs. However, the applied tariffs are generally much lower than the bound tariffs agreed upon in the Uruguay Round of the WTO, leaving a degree of uncertainty with regard to the future tariff level (Damuri 2012). It is therefore still common to include a comprehensive chapter on tariff elimination in PTAs.

In contrast to the special and differential treatment granted to developing countries in the WTO, PTAs are usually based on the principle of reciprocity. In order to get access to developed country markets, developing countries also have to reduce their tariffs. This has two major potentially negative effects. First, the developing country will no longer have the opportunity to keep tariffs high in order to protect infant industries until they become competitive enough for the world market. Second, the elimination of tariffs will go hand in hand with lost tariff revenue. In many developing countries with a large informal sector and a weak tax base, tariffs play a big role in raising government revenue. Although not related to policy space, this deprives the government of financial means that could potentially be used to promote economic development, e.g. public investments.

(ii) Services trade

Services play a major role in global value chain trade, as they constitute a large share of value added in the final product. Liberalising services so that they can be efficiently traded across borders may boost a further fragmentation of production. Being competitive in GVCs implies that all inputs must be sourced at the lowest price. Having cheap access to services thanks to low trade barriers thus is a major advantage. Liberalisation of services would also provide additional opportunities for developing countries to participate in and capture value in GVCs. As a matter of fact, some developing countries have already revealed a comparative advantage in services, e.g. India. Nevertheless, they may fear opening up their markets because it means exposing domestic service providers to international competition.

(iii) Investment and trade-related investment measures

Strong investment chapters promise to significantly contribute to GVC participation by attracting foreign investors, which can eventually lead not only to higher gross exports but also to higher exports in value added. This is especially true when a weak domestic regulatory environment leaves investors reluctant to offshore: an investment chapter that includes provisions on establishment, non-discrimination and dispute settlement may close the regulatory gap that initially scared off the potential investor.

The most risky element of an investment chapter is presumably the establishment of an investor–state dispute settlement mechanism. This mechanism allows foreign firms to sue the state before an international arbitration tribunal if it feels that the provisions covered in the agreement have been violated. In 2012, 58 new cases were brought to international arbitration, out of which 66% of respondents were developing or transition countries (UNCTAD 2013c). While the number of new cases was comparatively high in 2013 (57), claims are increasingly also filed against developed countries, bringing the share of developing country respondents down to roughly 50% (UNCTAD 2014). ISDS procedures are generally useful when investors are expropriated without compensation or not treated in a 'fair and equitable' way, but the relatively vague definitions leave room for much wider interpretation. For example, the tobacco giant Philip Morris is suing Uruguay for passing a law on the labelling of cigarette packages (Tienhaara 2011a).[17] In such cases, development objectives such as the improvement of health may be jeopardised. There is even the risk that developing countries refrain from making policies that increase social, health or environmental standards in order to avoid being sued (Tienhaara 2011b) – the so-called 'regulatory chill' – and that developing countries terminate their existing investment agreements altogether or refrain from concluding any in the future becuse of their fear of ISDS (Poulsen / Aisbett 2013).

Most developing countries have nevertheless opted for opening up to FDI flows and they try to reap the associated benefits. Trade-related investment measures and other performance requirements for foreign investors are, however, a very prominent means of promoting industrial development (WTO 2002). They may improve the opportunities for local firms to engage in GVCs and increase value capture in the domestic economy. For example, local content requirements set targets on the amount or share of inputs that have to be sourced locally. Local procurement directly generates additional domestic value added (UNCTAD 2013d) and further promises indirect long-term effects through technological spillovers improving the productivity and value creation of local firms.

Another performance requirement that can potentially affect trade in value added is export restrictions on raw materials, e.g. export taxes. By incentivising the processing of raw materials in the domestic economy before they are exported, export restrictions contribute to value capture in the local economy and to promoting exports of products at a higher value-added segment of the chain. These measures are attractive mostly for countries abundant in scarce natural resources that enjoy strong international demand and are thus less vulnerable to price changes.

Although these measures seem suitable at first, using them may result in unintended consequences: *"In the context of global production networks, these [local content] requirements are likely to leave a developing country outside supply chains, as the objective of such networks is precisely to fragment the production process and to move inputs across countries"* (Miroudot 2011). Whether using these measures will increase value capture or prevent countries from joining GVCs is an open question and certainly depends on the country-specific context. Nevertheless, chapters on investment and TRIMS

17 This is not only a problem in a developing country context. Australia faces the same claim by Philip Morris and now has refrained from including investor–state dispute settlement mechanisms in its agreements (Tienhaara 2011a).

tend to deprive developing countries of the possibility of considering these opportunities in the first place.

(iv) Standards

One reason for signing PTAs is the increased coordination cost that comes with organising international trade in global value chains. Technical and process standards with regard to quality, labour and environmental outcomes can bring these costs down (Gereffi / Humphrey / Sturgeon 2005). Baldwin / Clark (2000) argue that coordination costs are particularly high when, for example, value chains are producing non-standard products. Agreeing on common standards upfront can therefore reduce coordination costs and grant the signing partners a competitive advantage.

From a developing country perspective, the standards set in PTAs are typically higher than domestic ones, resulting in a gap between the capabilities needed for serving the domestic and the export markets (Keesing / Lall 1992). On the basis of data from 700 firms in 17 developing countries, Maskus / Otsuki / Wilson (2005) estimate that the cost of complying with foreign standards equals roughly 5% of a company's value added. There is also a risk that firms in developing countries cannot comply with the standards at all, locking them out of international markets (Baldwin 2000).

If a signing party raises domestic standards unilaterally, there should not be a problem as long as countries comply with the minimum standards. However, passing legislation on higher social or environmental standards can potentially lead to conflicts with those foreign investors who offshored part of the production process precisely because of the lower standards and now fear plummeting profits (see paragraph (iii) above).

(v) Public procurement

Many PTAs include a public procurement chapter to ensure that public funds are spent in an efficient and non-discriminatory way. This is a good thing in general as it makes sure that funds are not wasted through inefficient allocation. Nevertheless, in some countries 'discriminatory procurement' is used as a 'development tool', because the way in which public money is spent can have a notable impact on development (Dawar / Evenett 2011). Public procurement policy commonly targets industrial development, e.g. the promotion of small and medium enterprises as well as state-owned enterprises (Dawar / Evenett 2011).

Signing PTAs with a restrictive chapter on public procurement deprives developing countries of the opportunity to use this means of supporting industrial development and of attempting to increase domestic value capture. However, sourcing inputs efficiently (at the private as well as public sector level) is crucial for competitiveness in global value chains. Against this background, whether 'buy local' policies should be applied is quite ambiguous and reveals again a trade-off between trade and industrial policy objectives.

(vi) Competition

Ensuring a competitive environment is another factor that potentially helps to attract foreign investors. For example, Dutz / Vagliasindi (2000) find that *"effective enforcement of competition policy in transition economies is associated with more rapid entry of new*

firms". Developing countries may also benefit from the regulation of competition across borders, as they typically suffer the most harm from anti-competitive behaviour on the part of large transnational corporations entering their markets (Dawar / Holmes 2011). Dawar / Holmes (2011) argue that the benefits from enforcing competition policy by fighting anti-competitive practices outweigh the costs of implementation.

Nevertheless, some developing countries are suspicious of strong competition laws and fear the dominance of large foreign firms – as a consequence, they limit competition in order to strengthen domestic firms and protect their infant industries (Dawar / Holmes 2011). While the benefits of such a move are questionable, signing a PTA with a competition chapter will generally prohibit any such measures and thus restrict their choices of domestic policy instruments.

(vii) Intellectual property rights

Intellectual property rights are often perceived as an important determinant of success in attracting foreign direct investment. The rationale behind this is that goods with a significant content of research and design may cross borders multiple times – also through countries with weak IP protection. Including IPRs in PTAs is therefore meant to protect investors and grant them a certain extent of market exclusivity in order to encourage research and innovation (Fink 2011). However, the empirical evidence on the importance of IPRs in investors' decisions to invest abroad is mixed (Fink 2011).

Moreover, strong IPRs restrict developing countries in copying and adapting technology-intensive products. Learning from existing technology and developing their own (imitated) products could also help domestic firms to produce at a higher value-added segment of the value chain. Including strong IPR chapters in PTAs may therefore only slightly increase GVC participation and at the same time prevent countries from developing their own products with higher value-added content. Apart from the global value chain context, the protection of intellectual property rights plays an important role in public health considerations. While this protection provides an important incentive for research in the pharmaceutical sector, strong IPRs may reduce developing country access to medicines by raising their costs and preventing competition through imitated generic medicines (Brandi / Ladenburger / Pegels 2010).

The establishment of IP rules within the WTO already gave rise to concerns regarding policy space in many developing countries (Page 2007), although the TRIPS regulations grant some flexibility to developing countries, e.g. compulsory licensing and parallel importing[18] (Brandi / Ladenburger / Pegels 2010). Shadlen (2005b) examines various aspects of IP policy and concludes that trade agreements signed at the bilateral and regional level pose an even greater threat to the use of IP policy for development

18 Compulsory licensing: *"When the authorities license companies or individuals other than the patent owner to use the rights of the patent – to make, use, sell or import a product under patent (i.e. a patented product or a product made by a patented process) – without the permission of the patent owner."*
Parallel imports: *"When a product made legally (i.e. not pirated) abroad is imported without the permission of the intellectual property right-holder (e.g. the trademark or patent owner)."* Source: WTO Glossary

objectives than the WTO TRIPS agreement. For example, PTAs may extend the term for patents and limit the flexibilities built into the TRIPS agreement (Brandi / Ladenburger / Pegels 2010).

4.3 Summarising the trade-off

Including provisions in PTAs which demand deep commitments can be seen as a lock-in of domestic policy reform. PTAs are binding contracts and the enforceability of commitments makes them a valuable and credible instrument (Hoekman 2011). *"From a development perspective, the extension of PTAs to regulatory issues can be beneficial if it improves policy quality or credibility, thereby reducing risk premiums and helping to attract investment"* (Hoekman 2011).

Moreover, as explained above, many of the provisions play a special role in the context of global value chains. Any measure distorting competitiveness can eventually backfire and severely undermine a country's participation in global value chains. Regulating competition, government procurement, investment, intellectual property rights, etc. in such a way that the efficiency criteria are met should ultimately support a country's efforts to be part of a global value chain. From a trade policy perspective, signing deep PTAs therefore clearly pays off. A large number of developing countries (e.g. those participating in the negotiations of the Transpacific Partnership, Turkey and recently added EU members) have acknowledged these benefits and pursue a 'global integration strategy' involving both unilateral liberalisation and deep PTAs (Hoekman 2014).

Following a liberal trade policy and signing deep PTAs in order to encourage participation in GVCs, however, usually comes at the cost of domestic policy instruments to promote industrial development. The paragraphs above have highlighted these trade-offs for each of the major provisions. Figure 6 illustrated the fact that, among themselves, developed as well as developing countries sign comparatively shallow agreements. As a matter of fact, some larger emerging economies such as South Africa, Argentina and Brazil deliberately limit their PTA commitments in order to keep using trade policy for import-substitution and industrial-promotion objectives (Hoekman 2014).

In general, the elimination of tariff barriers is easy to implement and has quite predictable effects, while concessions regarding non-tariff barriers are more difficult to translate into domestic policies, and the associated consequences may not be obvious ex ante. Moreover, it is very difficult to measure to what extent preferential trade and investment agreements affect national regulations (Claar / Nölke 2013). The ongoing cases in the framework of investor–state arbitration (e.g. Uruguay vs. Philip Morris) give anecdotal evidence on the conflict between foreign investor and public policy interests. Another example is given by Claar / Nölke (2013), who argue that South Africa's 'Black Economic Empowerment' policy, which has played an important role in reconciling the population in the post-apartheid era, could not be maintained when signing an Economic Partnership Agreement with the EU. Cho / Dubash (2003) gather case-study evidence from the electricity sector and find as well that investment rules may inhibit the use of policy instruments motivated by public policy interests, hence restricting policy space for sustainable development.

It seems that until the recent past, the trade-off associated with preferential trade and investment agreements was not clear to many policy-makers, especially in the case of foreign direct investments (Tienhaara 2011a). For example, Poulsen / Aisbett (2013) found that many decision-makers in developing countries had not been aware of the far-reaching contents of international investment agreements (IIAs) until they were sued before the investor–state dispute settlement body.

However, guarding policy space for development has now moved to the top of the negotiation agenda of developing countries: Ecuador and Venezuela have already terminated their bilateral investment treaties, South Africa recently announced that it will not automatically renew BITs and may possibly terminate some as well (Stiglitz 2013). The elimination of export taxes is a major stumbling block in the recent negotiations on Economic Partnership Agreements between the EU and developing countries in Africa, the Caribbean and the Pacific (Schmieg 2013). Some WTO member countries are even pushing for a review of the WTO TRIMS agreement in order to allow for greater policy space (UNCTAD 2013d).

As a last note, even if developing countries succeed in guarding their domestic policy instruments, it is far from clear whether they actually achieve the targeted objectives, e.g. industrial development (Mayer 2009). Hoekman (2011) argues that industrial policy measures involve some negative side effects: they are costly, prolong the adjustment period and distort competition. Moreover, although well intended, they are prone to missing their objective owing to rent-seeking behaviour or general equilibrium effects.[19] The question raised in this chapter, however, is not whether developing countries should apply these measures but whether they have enough room for manoeuvre when they want and need to react to individual domestic circumstances in a way that is conducive to development.

5 Policy recommendations

Policy-makers in developing countries are walking a tightrope when trying to align trade and industrial policy objectives in a global value chain context. The preceding analysis has served as a basis for drawing conclusions about the role of preferential trade agreements for participation and value capture in global value chains from a developing country perspective. It also gives valuable insights to policy-makers that are currently faced with negotiating trade agreements and finding their role in global value chains. Against the background of the preceding chapters, the following policy recommendations with regard to PTAs are put forward:

Conduct a cost-benefit analysis of PTA membership

Developing countries should carefully weigh the pros and cons associated with preferential trade agreements. Section 3.3 presents sufficient empirical evidence to justify belief that PTA membership has a positive impact on trade flows within global value chains. There is consensus that in addition to tariff elimination, behind-the-border issues

19 Supporting a specific sector acts like a tax on all other sectors.

should also be addressed in order to achieve the deep integration needed for GVC participation. Developing countries aiming at participating in these chains are therefore well advised to reduce trade and transaction costs and improve their competitiveness in GVCs by signing a PTA with important partners. However, as argued before, doing so may come at the cost of sacrificing policy instruments for supporting domestic industries. *"How to determine the right balance between maintaining flexibility in national economic policy-making and reducing it through multilateral disciplines and collective governance remains a contentious issue"* (Mayer 2009). Policy-makers should therefore carefully assess the costs and benefits of PTA membership. This is a challenging task: it requires reliable data (which is often not available), a suitable methodology (e.g. general equilibrium modelling) and cooperation across ministries (Fink 2011). Policy-makers are advised to investigate the implications of the deep provisions in PTAs and the extent to which domestic policy measures would be restricted. As a follow-up, it would be beneficial to figure out whether second-best trade and investment policy measures can be replaced by less distorting instruments to support domestic development efforts (Hoekman 2011).

Gear PTAs towards developing country needs

In order to reap the most benefits from PTA membership, developing countries should try to gear the PTA towards their needs. First, the PTA provisions should ensure that foreign investors cannot sue the state for aligning domestic policies with changing situations on the ground (e.g. reaction to financial crises, implementation of higher standards, etc.). The comparative advantage of developing countries' participation in GVCs to date generally stems from low production costs. Naturally, this may change along the path of economic development and foreign investors should not be granted the right to sue states for policies supporting this development. For example, the Union of South American Nations (UNASUR) has established a forum for dispute settlement which excludes disputes over health, education, taxation, energy and the environment unless the signed agreement explicitly directs these cases to the dispute settlement mechanism, and it requires an attempt to make use of available domestic remedies (Tienhaara 2011a).

Second, developed countries should provide technical assistance (TA) to developing countries when signing North–South agreements. TA could serve, for example, to meet higher product and process standards as well as establishing and enforcing competition policies (Dawar / Holmes 2011). In this case, developing countries would not be left on their own with the costs of implementation.

Build capacities to successfully negotiate PTAs

Building capacities at the relevant policy level in developing countries is therefore crucial for negotiating beneficial PTAs. Hoekman (2011) calls for a new approach to North–South PTAs *"to liberalise and expand market access, to build in policy flexibility, and to broaden technical assistance"*. Achieving these objectives will not be possible without extensive knowledge of the implications of PTA membership (see the first policy recommendation above) and negotiation skills.

Pursue negotiations at the multilateral level

Developed and developing countries aiming at participating in GVCs should encourage negotiations at the multilateral level. The fact that the rules underpinning global value chain trade are made at the bilateral/regional level is not intuitive. Although production networks are still stronger at the regional level, the word 'global' implies a tendency towards more globalisation and increasing interconnectedness of regional blocs (Damuri 2012). According to Los / Timmer / de Vries (2014), since the turn of the century production networks expanded across regional blocs faster than within them, progressively creating a 'Factory World'. Noguera (2012) shows that bilateral GVC trade not only increases when two parties sign a PTA between each other, but also when they sign agreements with third countries through which products travel on the way to the end consumer.

Against this background, developed and developing countries should pursue multilateral negotiations. First, this step can grant access to potentially more value chains since the agreement applies not only to the preferential partners. Second, developing countries may strengthen their bargaining power with respect to policy flexibility in deep provisions when they take a common stance at the multilateral level. This strategy should defuse the strong trade-off between trade and industrial policy objectives, and between GVC participation and industrial policies for value capture, encountered in deep PTAs.

Taking a global value chain perspective at the multilateral level may even revive the sluggish negotiations at the WTO. Hoekman (2014) supports this supply chain approach as opposed to the 'silo approach' in the WTO which addresses each policy area in isolation:

> *"The idea is not that negotiations should focus on specific value chains, but that a supply chain framework can help identify how an overall package can be constructed that spans the different policy areas that are on the table, including not just tariffs but also services policies that affect the operation of supply chains."*

Given the importance of GVC trade, this approach accounts for the strong nexus of different policy areas and may help to align the heterogeneous country interests.

6 Suggestions for further research

While some policy recommendations can already be drawn from the preceding analysis, there is much scope for further research tackling the questions at the interface of global value chains, trade, investment and industrial policy. Partly thanks to the availability of new, insightful data, both the literature on global value chains and that on preferential trade agreements have gained momentum. The work on decomposing international trade flows into their value-added components as well as that on the detailed coding of trade and investment agreements provides a good basis for sophisticated empirical analysis. Future research should therefore make use of the newly available information and shed further light on global value chains and preferential trade agreements – and in particular on their interaction.

Concerning value-added trade, the field of research is expanding dynamically. However, so far the focus has been on the methodology and accounting frameworks in order to produce meaningful indicators for value-added trade, and few researchers have gone beyond descriptive statistics. Now, the frameworks and data seem mature and reliable enough to be put it into practice and used for more sophisticated econometric analysis.

Many developing countries have successfully used the opportunity to integrate into the international trading system by participating in global value chains, especially in East and South East Asia. Other countries are left behind or only contribute via low value-added segments of the chain, leaving their exports of value added insignificant. Descriptive statistics and several country studies have shed some light on these issues, but for a more general understanding of the determinants of GVC participation and value capture – and the particular role of trade policy in this regard – a broader cross-country analysis is lacking.

With regard to PTAs, it has been shown that they increase gross trade, intermediate goods trade and (to a lesser extent) trade in value added (see, e.g., Orefice / Rocha 2013, Noguera 2012, Johnson / Noguera 2014). Although existing studies give a broad account of the depth of PTAs, they are still very much treated as a 'black box'. Following recent empirical work that considers key provisions in trade and investment agreements (e.g. Dür / Baccini / Elsig 2014, Berger et al. 2013), there is a need to assess what role the design of PTAs can play in helping countries increase their value-added exports. Moreover, the value-added trade literature has so far focused on the 40 countries covered in the Word Input-Output Database, which is strongly biased towards European and other OECD countries. Extending the analysis to developing countries is crucial for understanding if and how they can benefit from signing PTAs.

Moreover, there is a need to better understand the implications that PTAs have for policy space in a global value chain context. While PTAs are undoubtedly an important means of participating in GVCs and promoting the exchange of goods, benefiting from this participation in terms of upgrading, i.e. moving to higher value-added tasks, may require complementary policies that are often restricted in deep PTA provisions. The arising tension between these objectives is quite intuitive but lacks strong empirical evidence.

7 Conclusion

This paper has explained in detail the implications of preferential trade agreements in a global value chain context. As GVCs imply a strong connection between trade and investment issues, not only traditional trade barriers but also behind-the-border policies have a great impact on whether countries participate in global value chains and how much value they capture. The deep PTAs that have emerged in the last decades not only eliminate tariffs, but cover a great deal of other policy areas providing an economic governance framework that complements local institutions. In that sense, their role for integration into international production networks cannot be overemphasised.

Developing countries may nevertheless face a trade-off between these benefits from deep economic integration and the associated restrictions on their policy autonomy which prevents them from making use of complementary policies intended to promote industrial

development and upgrading in GVCs. By addressing the trade-offs between trade and industrial policy objectives in a global value chain context, this paper acknowledges the negative repercussions of trade barriers in GVCs as well as the need for developing countries to accompany GVC participation with domestic policies. By doing so, it picks up the critique of Ravenhill (2014) and Dalle / Fossati / Lavopa (2013) on the 'new' GVC literature which almost exclusively argues for further liberalisation.

On the basis of the analysis of GVCs and deep PTAs, this paper has derived policy recommendations for developing countries and identified gaps in the literature that need to be addressed to better inform policy-makers in shaping their GVC policies.

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Appendix

Table 1: Country Coverage by income category	
High income (47)	Aruba, Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Greenland, Hong Kong (China), Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Kuwait, Latvia, Lithuania, Luxembourg, Macao (China), Malta, Netherlands, Netherlands Antilles, New Caledonia, New Zealand, Norway, Poland, Portugal, Russian Federation, Saudi Arabia, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, United Kingdom, United States, Uruguay
Upper middle income (26)	Algeria, Argentina, Belize, Brazil, Bulgaria, China, Colombia, Costa Rica, Ecuador, Gabon, Hungary, Iran (Islamic Republic of), Kazakhstan, Macedonia (TFYR), Malaysia, Maldives, Mauritius, Mexico, Peru, Romania, Seychelles, South Africa, Thailand, Tunisia, Turkey, Venezuela
Lower middle income (23)	Armenia, Bhutan, Bolivia, Cameroon, Cape Verde, Egypt, Georgia, Ghana, Guyana, India, Indonesia, Lesotho, Mongolia, Morocco, Pakistan, Paraguay, Philippines, Senegal, Sri Lanka, Swaziland, Ukraine, Uzbekistan, Viet Nam
Low income (9)	Bangladesh, Guinea, Kenya, Kyrgyzstan, Madagascar, Malawi, Nepal, Sierra Leone, Togo
Source: The World Bank, 2014	

Table 2: WTO+ and WTO-X areas	
WTO+	FTA Industrial, FTA Agriculture, Customs, Export Taxes, SPS, TBT, STE, Antidumping, Counterveiling Measures, State Aid, Public Procurement, TRIMs, GATS, TRIPs
WTO-X	Anti-Corruption, Competition Policy, Environmental Laws, IPR, Investment, Labour Market Regulation, Movement of Capital, Consumer Protection, Data Protection, Agriculture, Approximation of Legislation, Audio Visual, Civil Protection, Innovation Policies, Cultural Cooperation, Economic Policy Dialogue, Education and Training, Energy, Financial Assistance, Health, Human Rights, Illegal Immigration, Illicit Drug, Industrial Cooperation, Information Society, Mining, Money Laundering, Nuclear Safety, Political Dialogue, Public Administration, Regional Cooperation, Research and Technology, SME, Social Matters, Statistics, Taxation, Terrorism, Visa and Asylum
Source: Horn / Mavroidis / Sapir (2010)	

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