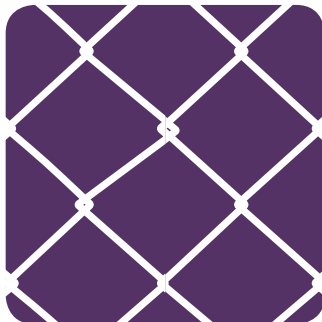
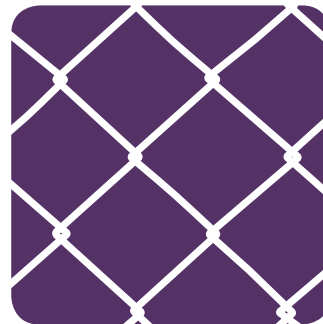
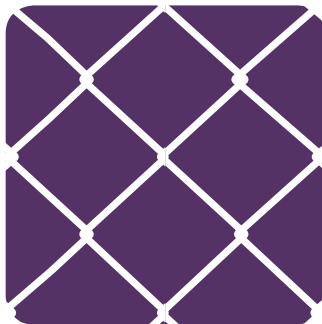
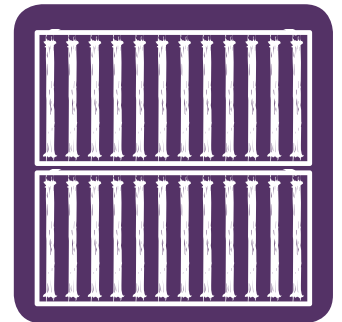
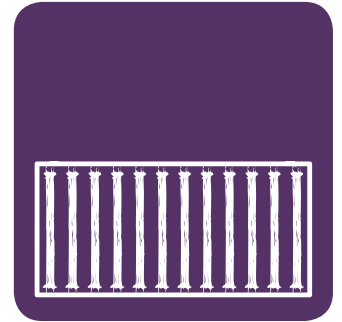


# Protectionism in the 21st Century



**The National Board of Trade** is a Swedish government agency responsible for issues relating to foreign trade, the EU Internal Market and to trade policy. Our mission is to promote open and free trade with transparent rules. The basis for this task, given to us by the Government, is that a smoothly functioning international trade and a further liberalised trade policy are in the interest of Sweden. To this end we strive for an efficient Internal Market, a liberalised common trade policy in the EU and an open and strong multilateral trading system, especially within the World Trade Organization (WTO).

As the expert agency in trade and trade policy, the Board provides the Government with analyses and background material, related to ongoing international trade negotiations as well as more structural or long-term analyses of trade related issues. As part of our mission, we also publish material intended to increase

awareness of the role of international trade in a well functioning economy and for economic development. Publications issued by the National Board of Trade only reflects the views of the Board.

The National Board of Trade also provides service to companies, for instance through our SOLVIT Centre which assists companies as well as people encountering trade barriers on the Internal Market. The Board also hosts The Swedish Trade Procedures Council, SWEPRO.

In addition, as an expert agency in trade policy issues, the National Board of Trade provides assistance to developing countries, through trade-related development cooperation. The Board also hosts Open Trade Gate Sweden, a one-stop information centre assisting exporters from developing countries with information on rules and requirements in Sweden and the EU.

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# Foreword

During the 2008 global financial crisis, fears arose that protectionism would follow in the wake of the large fall in world trade. In order to address that risk, the international community disavowed protectionism and committed to refrain from raising new trade barriers. Today, in a different political context, it appears that the words were never matched by action.

In this report, the National Board of Trade takes a broad view of protectionism, including barriers to trade in goods, services, investment flows, movement of people and data flows. The report is part of a comprehensive effort during 2016 to analyse the nature and effect of current protectionism. It is particularly pertinent at a time when an increasing number of voices are raised in favour of restricting trade.

Per Altenberg is the main author of the report. Isabelle Ahlström, Emilie Anér, Emanuel Badehi Kullander, Ulf Eriksson, Sun Hydén Biney, Maria Johem, Jonas Kasteng, Martin Magnusson, Kristina Olofsson and Magnus Rentzhog also contributed to it. I wish to thank the external reviewers, Sébastien Miroudot and Ingo Borchert.

Stockholm, May 2016

A handwritten signature in blue ink, appearing to read 'Anna Stelling', with a long horizontal flourish extending to the right.

Anna Stelling  
General Director  
National Board of Trade

# Executive Summary

In this report, the Board takes a broad view of trade that refers to all types of 21<sup>st</sup> century trade flows, including trade in goods, services, investment flows, movement of persons and data flows.

## Approaches to protectionism

The approaches to protectionism vary widely between international institutions and independent analysts. There is no consensus as to what defines the term. Crucially, however, all surveyed institutions highlight two core elements: (1) the discrimination of foreign economic operators, and (2) trade-restrictiveness. A further dimension that often complements these two aspects is the extent to which public measures distort markets.

The Board views a discrimination approach as the most appropriate to frame issues related to protectionism. It combines normative legitimacy (non-discrimination is a central WTO legal principle) with practical application (it does not require advanced quantitative analysis). In addition, there is a clear element of implied intent whenever foreign economic operators receive a less favourable treatment than domestic commercial interests.

## Trends in 21<sup>st</sup> century protectionism

There are worrying indications that protectionism is on the rise again. While trends with respect to agricultural support in many OECD economies, FDI and services supplied through local establishment appear to be moving in a positive direction, tariff liberalization is running out of steam and several types of NTBs have experienced a rapid increase in recent years. New restrictions on data flows and the risk of a backlash against the movement of persons, add to a situation that is of growing concern.

After the 2008 global financial crisis, the G20 vowed to “refrain from raising new barriers to investment or to trade in goods or services”. It is clear from our analysis that this standstill pledge has not been honoured and that governments currently introduce far more protectionist measures than they remove.

## Tariffs for trade in goods – levelling out

Tariffs - that were on a downward trajectory during the latter part of the 20<sup>th</sup> century - have levelled out in many major economies during the first part of the 21<sup>st</sup> century. One potential explanation for this trend is the fact that countries maintain tariffs in order to use them as bargaining chips in ongoing and future trade negotiations. Since many trade negotiations go on for a long time, the paradoxical consequence is that 21<sup>st</sup> century trade negotiations might prevent rather than promote tariff liberalization.

Multilaterally, the observation that tariff liberalization has run out of steam is unsurprising since the DDA has not been concluded. It is more unexpected that bilateral and regional trade negotiations also do not seem to have had any significant downward effect on the tariffs of major economies, at least not compared to tariff rates applied on an MFN basis. Since the effect of trade negotiations on services and FDI tends to be small in terms of new market access, this observation casts doubt on the effectiveness of trade negotiations more generally. On the other hand, the value of trade negotiations lies not only in new market access but also in greater predictability when countries bind themselves to the mast. There are also a number of free trade

agreements, which are either under negotiation or have been concluded recently, that could produce trade liberalization in the future.

## Increasing non-tariff barriers for trade in goods

For many NTBs we observe an increase in protectionism in recent years. Countries increasingly resort to discretionary and non-transparent measures instead of traditional, transparent and well-regulated trade barriers. Developments with respect to subsidies, domestic content requirements and public procurement are particularly worrisome from this perspective. They represent NTBs that affect a lot of trade, are subject to a high degree of discretion and for which discriminatory measures vastly outnumber liberalizing ones.

An important consideration related to the increase in NTBs has to do with the impact on governance and institutions. Historically, good governance considerations meant that quantitative restrictions, which require market access allocation through licences, were banned by the GATT. By contrast, tariffs declared in advance and published openly were allowed. This historical lesson with respect to prioritization among trade barriers appears to have been forgotten in recent years. In the future, therefore, particular priority should again be given to restricting discretionary and non-transparent NTBs.

## Positive development for FDI and services supplied through local establishment...

Most countries consider it to be in their own interest to continue to liberalize FDI and services supplied through local establishment. At the same time, many restrictions on entry, ownership and operations remain. Market access can also be unpredictable as a result of discretionary policies, for instance with respect to the allocation of licenses.

## ...as well as for agricultural support among OECD members

We identify a long-term positive development for agricultural support in many OECD countries. At the Nairobi ministerial conference in 2015, the WTO decided to phase out remaining export subsidies for agricultural products, a decision that contributes further to the positive trend. This experience shows that the international community can, through determined and sustained action, reduce protectionism even where it is the most entrenched from the outset. At the same time, agriculture remains by far the most protected sector in the global economy.

## Movement of persons – risk of a backlash

Continued high barriers to labour migration and the temporary movement of persons is a source of considerable concern. There is a risk that renewed public perceptions of migration as a threat, could reverse previous positive trends. As we have noted, research indicates that the gains from cross-border movement of persons are substantial. In view of this, continued liberalization of labour migration and temporary movement of persons is essential. From a good governance perspective, it would be particularly welcome to improve transparency and predictability in the applied regimes - for example, by defining criteria for labour market tests.

## Barriers to data flows threaten to fragment the digital economy

Rising restrictions on the movement of data is a growing problem that threatens to fragment the global digital economy and raise the cost of goods and services. More and more restrictions are being put in place and they are of ever greater variety. As a consequence, they are likely to have an increasingly negative impact on trade. At the same time, the ICT revolution has made it easier to circumvent trade barriers by opening up new modes of supply or making alternative modes of supply less costly.

## A global value chain perspective of protectionism

While this report organizes 21<sup>st</sup> century trade barriers according to different flows in the global economy (goods, services, investment, people and data), firms rarely perceive trade in such a compartmentalized fashion. Instead, different barriers and liberalizing measures interact by influencing costs for firms and decisions about whether to supply a market through cross-border trade, local establishment or digital platforms. These interaction effects are difficult to explore and fully comprehend. In recent years, however, a more realistic perception of business reality and the trade barriers that firms face have begun to emerge in the trade community.

## Barriers to the flow of knowledge and technology

The spread of knowledge and technology is potentially the most important force of economic development associated with international trade. Consequently, there is a risk that barriers to cross-border flows of knowledge and technology could prevent economic progress. Due to the absence of data and an established methodology to measure such barriers, this report does not cover barriers to the flow of knowledge and technology. For the future, however, this is undoubtedly an important aspect of any work that attempts to provide a comprehensive overview of global protectionism.

## Trade effects

Available quantitative analysis suggests that trade has been negatively affected by protectionist measures introduced since the global financial crisis. So far, however, the recent slow-down in world trade has primarily been attributed to factors other than protectionism, notably falling energy prices, demand-driven cyclical factors and structural factors related to a retrenchment of international supply chains. An important next step would be to assess the trade impact of recent protectionism more systematically.

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# 1. Introduction

*“No idea is more widely accepted within the economics profession than that protectionism is an evil which is to be fought any time, any place”*

*(Andrew K Rose, professor University of California Berkeley).*

The multilateral trading system rests on the notion that protectionism harms prosperity and economic development. Any treatment of protectionism also inevitably touches on fundamental ethical and legal questions such as the equal treatment under law of foreign and domestic citizens.

The fear of protectionism has deep historical roots. The first modern political conflict associated with protectionism occurred during the fight over the British Corn Laws in the 19<sup>th</sup> century. During the 20<sup>th</sup> century, a vicious protectionist circle began with the US Tariff Act of 1930, also known as the Smoot-Hawley Act. The Smoot-Hawley Act raised average US tariffs to 45 percent (Irwin, 2011). The contraction of world trade and downward economic spiral that occurred in the 1930s are regularly raised as a warning of the economic consequences of protectionism.

The experience of the 1930s laid the foundation for the post-war Bretton Woods institutions and the current international trading system. As the pre-war experience developed into a widely held view of what went wrong in the 1930s, early GATT-era efforts to roll back protectionism centred on tariffs and quantitative restrictions on manufactured goods. At the same time, the war experience

produced arguments for self-sufficiency in agricultural production. As a consequence, agricultural protection was not addressed at the multilateral level for several decades after World War II.

After the end of the cold war and the conclusion of the Uruguay Round, hopes were high that the WTO would institutionalize progress in the work to reduce protectionism. While the Doha Development Agenda (DDA) was never able to meet those expectations, a general optimism that protectionism was in decline prevailed during the first decade of the 21st century.

## The global financial crisis

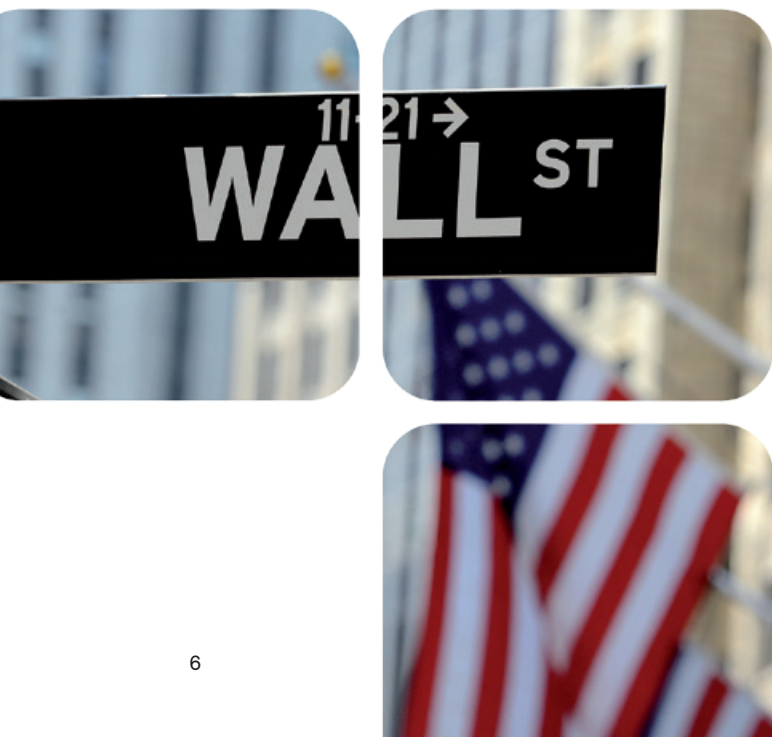
In the wake of the 2008 global financial crisis (GFC), the fears of repeating the mistakes of the 1930s returned. When the GFC struck in 2008, G20 leaders therefore agreed as follows in November 2008:

*“We underscore the critical importance of rejecting protectionism and not turning inward in times of financial uncertainty. In this regard, within the next 12 months, we will refrain from raising new barriers to investment or to trade in goods or services, imposing new export restrictions, or implementing World Trade Organization (WTO) inconsistent measures to stimulate exports” (G20, 2008).*

This “standstill agreement” has since been renewed at each G20 summit. Shortly afterwards, a surveillance system run jointly by the WTO, the OECD and UNCTAD was established that would monitor the G20 commitment. At the same time, an independent non-government initiative – the Global Trade Alert (GTA) – was launched with a similar purpose.

Shortly after these monitoring mechanisms were set up, the OECD began to develop a services trade-restrictiveness index (OECD STRI) and the World Bank introduced another project with the same name (WB STRI). Furthermore, since 2000 the OECD maintains an FDI restrictiveness index with annual updates since 2010.

In addition, in 2009 the World Bank published an overall trade-restrictiveness index (OTRI) that takes non-tariff barriers into account and allows broader comparisons between different instruments affecting trade in goods. Finally, both the USTR and the European Commission monitor trends in the trade policies of US and EU trading partners.







In a relatively short amount of time, the international community thus went from having no systematic cross-country monitoring of protectionism to having a plethora of ambitious projects with that objective in mind.

## 1.1 Purpose

While there are a range of different institutions and publications that attempt to measure protectionism, no-one, to our knowledge, has collected and organized available evidence in order to provide policy makers with an overview.

The purpose of this report is to synthesize efforts to monitor protectionism in the 21<sup>st</sup> century. In doing that, we analyse the status and character of modern-day protectionism, as well as important trends, including the overarching question of whether protectionism is on the rise or in decline.

## 1.2 Method

In order to provide an overview of protectionist trends, we surveyed relevant literature and databases. In particular, we surveyed reports relating to the WTO Secretariat's Trade Monitoring project, the Global Trade Alert, the World Bank Overall Trade Restrictiveness Index, the joint OECD-UNCTAD reports on G20 investment measures, the OECD's FDI restrictiveness index, the OECD Services Trade Restrictiveness Index and the World Bank Services Trade Restrictiveness Index. We also drew on the European Commission's reports on potentially trade-restrictive measures and the USTR's "National Trade Estimate Report on Foreign Trade Barriers". In addition, we utilized UNCTAD,

OECD, WTO and World Bank databases that record tariffs, trade defence measures and agricultural support.

One of the challenges in selecting sources for this study has to do with how different institutions measure trade barriers and if they accurately reflect actual protection. In other words, are they reliable? To some extent our selection is arbitrary in the sense that we did not conduct any in-depth evaluation of the various methods. Instead we relied on the fact that international institutions such as the WTO, the World Bank, UNCTAD and the OECD, have extensive expertise and broad legitimacy on trade issues. In the case of the Global Trade Alert, it is the largest database available recording measures that affect trade. Consequently, it has become a frequent point of reference in discussions on protectionism. We also considered it important to include the Global Trade Alert because it is not bound by political constraints to the same extent as some of the member-driven international organizations. Finally, the European Commission and the USTR were included because they represent the two largest trading economies in the world. As the reader will notice, however, we relied less on them than on other sources. In fact, the USTR does not report aggregates in its treatment of foreign trade barriers so we used it mainly for the analysis of different approaches to protectionism in section 2.2.

In terms of the selection of countries in the different figures found in the report, we mainly report barriers maintained by large G20 economies such as the EU, the US, China, Japan, India, Brazil, Russia, Canada, Australia, Korea, Mexico, Indonesia, South Africa and Argentina. Depending on the context, the specific selection of countries varies.

## 2. Trade and Protectionism

Before analysing the direction and character of modern day protectionism, it is important to address how we view core concepts such as international trade and protectionism.

### 2.1 What is trade?

Historically, economic transactions designated as “trade” referred mainly to cross-border purchases of goods. For a long time, this conception of trade has been too narrow. Today, international trade represents a range of economic transactions that may be related to any of the following:

- the cross-border sale of finished, intermediate and capital goods,
- services delivered through several different modes of supply,
- the cross-border movement of persons essential for the production or sale of goods or services,
- the sale of goods or services through local establishment in the form of foreign direct investment
- the movement of data required for cross-border transactions of goods or services
- the collection and spread of knowledge related to technology, process and production methods etc.

From the perspective of firms that trade internationally, all of these “flows” are part of the process that we commonly think of as international trade. In line with recent work by the Board on trends in world trade and barriers to different types of trade flows, we refer to this as a comprehensive perspective on trade.

While we regard the last bullet point as an important aspect of 21<sup>st</sup> century trade, barriers to flows of technology and knowledge are not treated in this report. The reason is a lack of data and the absence of a common view of the nature of such barriers. It proved even less feasible to identify an established methodology on how to measure barriers to technology and knowledge.

### 2.2 What is protectionism?

There are a range of different approaches that can be used to analyse protectionism. No formally agreed-upon definition exists either in academia or

among international institutions. In fact, when surveying the literature, we were struck by how rare clear-cut definitions are and how heterogeneous the different approaches are. In view of this, we do not suggest that it is possible to arrive at a universally accepted definition of protectionism. There is, however, a need to advance the discussion and identify the most appropriate approaches.

In our survey of the different institutions mentioned in section 1.2 (and listed in table 1), we identified six broad approaches to protectionism:

1. A set of policy instruments primarily affecting trade in goods
2. Policy instruments covered by the WTO or criteria based on WTO legality
3. Criteria based on the intent of the policymaker
4. Criteria based on whether public measures restrict trade
5. Criteria based on whether public measures discriminate against foreign firms or other commercial interests
6. Criteria based on whether public measures distort markets

#### 1. A set of policy instruments

This approach predates the fragmentation of world trade associated with global value chains, digitization and the increase in trade in services. Often the selection of instruments is derived from available data, for instance on tariffs and trade defence measures.

A significant drawback of this approach is that it is narrow and therefore not compatible with a comprehensive perspective of international trade. In addition, it allows governments to opt for new forms of protectionist policies.

#### 2. WTO coverage and/or legality

Approaches that look at whether a measure is covered by and/or is legal under WTO accords have the advantage of enjoying broad legitimacy. A major weakness of such an approach, however, is the fact that international trade agreements are ultimately political bargains that are not based on a systematic analysis of the nature of protectionism. In addition, many instruments fall outside such a definition. With a definition of protectionism that looks strictly at WTO (non)legality, for instance, almost all current tariffs would fall outside the scope of such a definition, a result that would be absurd.



### 3. An intent-based approach

A definition based on intent is perhaps the most intuitive of the different approaches. After all, the introduction of protectionist measures implies the intention of a policy maker to protect something (jobs or an entire industry). It has the drawback of requiring us to know the motives of policymakers, motives that are often diverse and difficult to pinpoint. As a result, it is not very practical to apply. In addition, intent-based approaches create incentives for policy makers to state false motives for measures that affect trade. Despite these concerns, the Board has used an intent-based definition of protectionism in the past (Kommerskollegium, 2009).

### 4. Trade restrictiveness

Criteria that focus on whether measures are trade restrictive have the appeal of being theoretically sound. It is, after all, the trade effects that we are ultimately interested in. Furthermore, they allow us to compare measures across sectors, instruments and types of trade flows. At the same time, a determination of trade-restrictiveness typically requires an assessment of whether measures reduce trade, an assessment that can become subjective unless the actual trade impact is estimated. Moreover, quantitative assessments of the trade impact are associated with substantial data-related and methodological challenges.

Another problem with this approach is the fact that there are many instances when the introduction of a public measure widely regarded as prudent policy could have the effect of reducing trade. Most SPS or TBT measures fall into this category. As a result, such criteria might have low legitimacy. Conversely, there are domestic meas-

ures that we normally associate with protectionism that could lead to increased trade. Various types of subsidies and export support measures come to mind here.

### 5. Discrimination

Criteria based on whether measures discriminate against foreign firms or other commercial interests represent what we refer to as a discrimination approach. The benefit of this approach is that the non-discrimination norm has a strong legal foundation in the main WTO agreements. Moreover, one might argue that a protectionist intent is implied when foreign economic operators receive a less favourable treatment than their domestic counterparts. The drawback is that it does not include all trade-restrictive or trade-distortive measures – for example, SPS measures that restrict trade without being based on “sufficient scientific evidence” and/or an “objective assessment of risk”!

### 6. Market distortion

Yet another approach is based on whether measures distort markets. In other words, it is not the trade effect per se but the effect on the efficiency of markets that is of interest here. As such, it is closely related to whether measures produce negative welfare effects. Again, this is theoretically appealing, but it is difficult to see how it could be applied more broadly. After all, a lot of domestic regulation also restricts competition and distorts markets without discriminating between foreign and domestic operators. With a market distortion approach, the distinction between trade policy measures and domestic regulation eventually becomes blurred.





### Conclusion – two core elements of protectionism

As mentioned, the approaches to protectionism vary widely between different institutions. (See table 1 for an overview). However, the two core features of protectionism that most of the surveyed institutions highlight are (1) discrimination and (2) trade-restrictiveness. To a large degree, these two approaches overlap. Tariffs both discriminate against foreign economic operators and restrict trade. There are, however, instances in which the two approaches differ. Export subsidies discriminate against foreign operators but do not restrict imports. Conversely, there are a range of TBT and SPS measures that restrict trade without necessarily discriminating between foreign and domestic economic operators. See box 1 below.

Another important dimension of protectionism that several (but not all) of the surveyed institutions highlight, is the extent to which public measures distort markets.

Ultimately, the Board regards a discrimination approach as the most suitable to frame issues related to protectionism. Of all the approaches (1-6), a discrimination approach offers the best combination of normative legitimacy (non-discrimination is a central WTO legal concept) and practical application (it does not require advanced quantitative analysis). In addition, there is a clear element of implied intent whenever foreign economic operators receive a less favourable treatment than domestic operators. Non-discrimination requirements also infringe less on countries' sovereignty or "policy space", since they insist only that laws and regulations be applied equally to foreign and domestic economic operators. Consequently, this approach also has a strong ethical foundation that many can embrace both inside and outside the trade community.

Another distinction has to do with whether an approach is "narrow" (is restricted to one type of trade flow) or "broad" (includes all/several types of trade flows). This dichotomy corresponds to the discussion in section 2.1 of the need for an updated conception of trade. In line with our comprehensive perspective on trade, the Board advocates a broad approach to protectionism.

#### Box 1

##### Protectionist approaches: discrimination vs. trade-restrictiveness

	Trade-restrictive	Not trade-restrictive
Discriminatory	Tariffs, quotas etc.	Export subsidies*
Non-discriminatory	Some SPS- and TBT measures, some data regulation	Prudential, non-discriminatory, non-trade-restrictive regulation

\*While export subsidies can be detrimental to the export opportunities of other countries, they are designed to stimulate (a country's own) exports. In this sense, they are not trade-restrictive. In the end, however, the net trade effect from export subsidies could be negative and they certainly distort markets.

**Table 1: Institutions monitoring protectionism**

	WTO	Global Trade Alert	World Bank Overall Trade Restrictiveness Index	World Bank Services Trade Restrictiveness Index	OECD Services Trade Restrictiveness Index	OECD/UNCTAD joint investment reports	OECD FDI restrictiveness index	The European Commission	USTR
<b>Geographic coverage</b>	G20 plus another wider selection of 87 WTO members	Global (233 economies). Reports focus on G20.	78 countries	109 countries	40 countries	G20	58 countries (34 OECD member states and 24 non-member states)	31 EU trade partners	62 economies (with the EU treated as one)
<b>Unit of measure</b>	Number of "trade restrictive measures"	Number of discriminatory measures	Hypothetical unitary tariff level	Index (0 to 100)	Index (0 to 1)	Number of measures that discriminate against foreign investors or restrict capital movement	Index (0 to 1)	Number of "potentially trade-restrictive measures"	None, only treats countries individually
<b>Time span</b>	Since 2008	Since 2008	2008, 2009	Collected 2008-2010	2014 and 2015	Since 2008	Since 2000	Since 2008	Since 1985
<b>Type of cross-border economic flows covered</b>	Goods	Goods, services, FDI, migration	Goods	Services, FDI and movement of persons	Services, FDI and movement of persons	FDI, capital movement not related to FDI	FDI, movement of capital, movement of persons	Goods, services and investment	Goods, services, investment, electronic commerce
<b>Types of measures covered</b>	Tariffs and NTBs affecting trade in goods	All government measures discriminating against foreign commercial interests	Tariffs and 30 types of NTBs	Restrictions on services, FDI for movement of persons for high-skilled personnel.	Restrictions on services and the movement of persons, barriers to competition. Regulatory transparency	Measures that discriminate between foreign and domestic investors, restrictions on capital movement.	Foreign equity restrictions, screening and approval, restrictions on foreign key personnel, other operational restrictions	Tariffs, NTBs, subsidies, services and investment barriers	Tariffs, NTBs, subsidies, barriers to services and investment, lack of IPR, anti-competitive practices, bribery and corruption
<b>Approach to protectionism according to 1-6 in section 2.2</b>	Set of policy instruments (1)	Discrimination (5)	Trade restrictiveness (4)	Trade restrictiveness + discrimination (4,5)	Trade restrictiveness, discrimination, market distortion (4,5 and 6)	Restrictiveness and discrimination (4,5)	Discrimination (5)	Trade restrictiveness discrimination, market distortion (4,5,6)	Trade restrictiveness, discrimination, market distortion, absence of good governance, absence of IPR. (4,5,6,+).
<b>Focus on both deep (behind-the-border) and shallow (MA) measures</b>	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes

## 2.3 The cost of protectionism

*“No country has developed successfully in modern times without harnessing economic openness—to international trade, investment, and the movement of people.”*

*(Selina Jackson, World Bank Special Representative to the UN and WTO).*

To some extent, a discussion on the costs of protectionism is the mirror-image of the debate on the gains from trade liberalization. In the following, therefore, we give a brief theoretical and empirical presentation of the gains from trade liberalization and the cost of protectionism.

Economists draw a distinction between static and dynamic gains from trade. *Static gains* represent a change in resource allocation that takes place internationally after trade is liberalized. Trade liberalization allows countries to specialize according to their comparative advantage, which produces a more efficient international allocation of production. These efficiency gains are shared by countries that participate in trade and typically benefit consumers and exporters but not import-competing producers. Static gains from trade mean that the economy moves from one level to another. In other words, it is a one-off effect that does not produce steady economic growth over time.

*Dynamic gains* from trade on the other hand make the domestic economy more productive. Examples of potential gains from trade liberalization that fall into this category are:

- diffusion of knowledge and technology
- economies of scale
- increased competition and innovation
- a within-country selection of more productive firms
- access to cheaper and more productive input goods and services
- less rent-seeking behaviour and reduced incentives for corruption

Conceptually therefore, the cost of protectionism includes everything from loss of allocative efficiency to lower productivity and costs associated with corruption. Conversely, the gains from protectionist policies mirror the costs associated with trade liberalization: adjustment costs to structural change, loss of tariff revenue etc.

## The empirical debate on trade and growth

For a long time, the empirical debate on trade and growth focused on methodological discussions on the proper way to isolate effects of openness on growth from other factors. During the 1990s, a series of papers were published demonstrating a correlation between openness and economic growth (Sachs and Warner, 1995, Edwards, 1998 and Frankel and Romer, 1999). During the early 2000s, however, critics of this view argued that the quality of domestic institutions, rather than openness to trade, explained almost all the cross-country differences in economic growth (Rodrik and Rodríguez, 2001, Easterly and Levine, 2003, Rodrik, Subramanian and Trebbi, 2004).

During the last decade, however, a new generation of research has emerged that (1) identifies firm- and industry-level increases in productivity as a result of trade liberalization (Melitz and Trefler, 2012; Melitz & Redding, 2014) and (2) demonstrates how access to imported inputs improves the performance of the economy (Amiti and Konings, 2007; Estevadeordal and Taylor, 2013).

Melitz and Redding (2014) identify two sources of productivity gains from trade liberalization, one at the industry level and one at the firm level. Melitz and Trefler (2012) find that Canadian labour productivity rose by 14 percent during the 1990s as a result of the free trade agreement between the US and Canada. They attribute about two thirds of these gains to industry-level productivity improvements and one third to firm-level effects.

A different strand of literature focuses on another source of productivity gains from trade liberalization: access to cheaper and better input goods. According to Estevadeordal and Taylor (2013), countries that liberalized between 1985 and 2000 grew by about one percentage point more than countries that did not. This result is based on more recent data and a different methodology than the studies criticized by Rodrik and Rodríguez in the early 2000s. According to Estevadeordal and Taylor, a substantial part of the growth effect they identify comes from reducing barriers to imported intermediate and capital goods. If the estimates by Estevadeordal and Taylor are correct, it indicates quite substantial economic costs from protectionism based on differences in trade policy treatment.

In a similar vein, Amity and Konings (2007) estimate the productivity gains in Indonesia from



reducing tariffs on intermediate goods. They conclude that a 10 percent reduction in import tariffs leads to productivity gains of 12 percent for firms that import their inputs. The productivity gains from reducing tariffs on intermediate goods were at least twice as large as the gains from reducing tariffs on consumer goods.

### Estimates of the effect of going from trade to no trade

Fajgelbaum and Khandelwal (forthcoming in *Quarterly Journal of Economics*) report an average gain of 32 percent in real income (for a set of 20 countries) when going from autarky to trade. Because prices of goods consumed intensively by the poor fall more when trade is liberalized, the poor also experience larger gains. At the 10th percentile of the income distribution, Fajgelbaum and Khandelwal estimate the real income gain from opening up to trade at 63 percent.

Irvin (2005) estimates that the costs from the US complete ban on overseas shipping declared by Thomas Jefferson during the Napoleonic wars, reduced US real income by 8 percent.

Another example is from the blockade imposed by Israel on the Gaza strip after Hamas came to power there in 2007. According to Etkes and Zimring (2014), aggregate welfare declined by between 14 and 27 percent as a consequence of the blockade.

### Other estimates of protectionism

Estimates of the cost of protectionism include a series of studies commissioned by the Peterson Institute of International Economics during the 1990s. In these static analyses, the cost of protectionism ranged between 1 and 7 percent of GDP in economies such as the EU, the US, Japan, Korea and China.

Finally, Irwin (2011) estimates that the 1930 Smoot-Hawley tariffs reduced dutiable US imports by 13-17 percent – enough to reduce total imports by five percent. In a back-of-the-envelope calculation, Irwin calculates that this translates into an annual income loss of 0.3 percent of GDP. This is probably a smaller impact than most people imagine, in particular when one compares it with the subsequent collapse in US and world trade in the early 1930s. It is still, however, a substantial reduction from just one piece of legislation.



The presentation above represents only a small fraction of the literature indicating costs from protectionist trade policies. As the quotation by Rose at the beginning of the report indicates, the consensus on the negative effects of protectionism is solid, including among economists who question strong growth effects from trade liberalization.<sup>2</sup>

This conclusion does not ignore the fact that protectionism often benefits certain groups in a country, that there are both winners and losers from trade liberalization and that trade reform can affect income distribution and employment within a country.<sup>3</sup> The focus in our presentation has been on the overall welfare and growth effects resulting from protectionism, however, and here the literature leaves little doubt: protectionism as a policy prescription is associated with substantial economic costs for a society.

## 2.4 Protectionist motives

*“I’m a free trader. I love free trade. But it’s got to be reasonably fair. I would do a tax, and the tax—let me tell you what the tax should be. The tax should be 45 percent.” (US presidential candidate, Donald Trump proposing a 45 percent tariff on goods from China during a meeting with the New York Times editorial board on 5 January 2016)*

Given the costs associated with protectionist trade policies, we would expect policy makers to refrain from imposing discriminatory measures. Yet protectionism does not seem to have lost its appeal. If anything, the current political climate in many OECD countries is dominated by calls for more discrimination of foreign commercial interests. What explains this attraction? Why do policy-

makers keep imposing trade barriers that would damage the economic prospects of their country?

To begin with, it is important to keep in mind that few policy-makers accept protectionism as a description of the discriminatory public measures that they support. As the quote above indicates, even blatantly protectionist proposals are preferably described in other (albeit less Orwellian) terms. The reason is presumably that “protectionism” still has a negative connotation in many countries. Beyond this observation, however, a range of motives for discriminating foreign firms can be identified, motives that also vary greatly between countries.

### **Theoretical explanations**

The view that private sector lobbying influences trade policy has long been central to theories that try to explain protectionism. The most well-known theoretical contribution in this area is Gene Grossman and Elhanan Helpman’s ‘protection for sale’ model.

*“Our modelling focuses on the political interactions between a government that is concerned with campaign contributions and with the welfare of the average voter and a set of special interest groups that care about the welfare of their members”*

*(Grossman and Helpman, 1994, p. 848)*

Less formally, the argument often runs as follows: whereas the gains from trade liberalization are shared broadly, the costs are concentrated among a few import-competing producers. Special interests therefore have greater incentives to lobby policy-makers. In the end, politicians who want to be elected must cater to these special interests. As a consequence, protectionism is an inherent problem in modern societies.

### **Levelling the playing field**

In the public debate, policy-makers often refer to a need to level the playing field as a motivation for protectionism. One set of arguments that falls into this category is based on development motives. Historically, many developing countries applied import substitution policies that protected “infant industries” from international competition. High trade barriers were required to compensate for higher productivity in developed countries, it was argued. During the 1980s, however, this strategy began to lose traction. Instead, many developing

countries chose to adopt outward-oriented development strategies. In addition, many developing countries have historically had fiscal motives for maintaining trade barriers since tariffs can make up a substantial share of government revenue.

In recent years, a developed-country version of import substitution policies has emerged in the form of industrial or “reindustrialization” policies. Like import substitution policies, they rely on the view that public support for certain parts of the economy, while simultaneously drawing resources away from other sectors, can improve the long-term economic prospects of the country. Often this argument is combined with the view that less economic integration with other countries is desirable to help achieve the policy objective.

One problem with level playing field arguments is that all sides tend to use them simultaneously. Developing countries argue that they cannot compete with high-productivity developed-country firms. Therefore protection is required. Developed countries argue that they cannot compete with low wages and less stringent labour/environmental laws in developing countries. Again, measures that correct for these disadvantages are required.

Furthermore, most level playing field motives for protection are based on a conviction that trade patterns are in fact not determined by comparative advantage but by differences in absolute productivity. Consequently, protectionism thrives in an us-versus-them atmosphere in which trade is viewed as a zero-sum competition between countries rather than as a smart institution that can serve and stimulate the economy.

Yet another motive for maintaining trade barriers has to do with a concern that structural adjustment associated with trade liberalization will destroy more jobs than it creates. The jobs people already have are regarded as safe, whereas the prospect that those jobs will be replaced with new and better paying ones if the country is exposed to more trade is viewed with distrust.

Despite these concerns, it is difficult to imagine policy objectives that are better achieved through discriminatory trade policies than through non-discriminatory rules and regulation. As usual, it is better to address policy objectives directly rather than to design policy based on the origin of firms. Policies that focus on discriminating foreign economic operators will almost always be inferior to alternative policy options.



### 3. Trade in Goods

In the following sections, we review the current state of protectionism for goods, services, investment, the movement of persons and data flows (sections 3-7). In the final section, we summarize the analysis and identify protectionist trends.

#### 3.1 Overall trends

In 2014, global trade in merchandise goods amounted to \$19 trillion (WTO, 2015a). While trade in services increases rapidly, trade in goods remains by far the largest type of trade flow in the global economy.

For trade in goods, there are a range of public measures that can be used either to discriminate against foreign economic operators or to restrict trade. Below, we discuss the three institutions that analyse the development of these measures at an aggregate level and over time. We then proceed to discuss key instruments affecting trade in goods individually.

#### WTO Trade Monitoring

The WTO monitors a set of G20 trade measures that affect trade in goods. The instruments covered by the WTO are trade defence (anti-dumping duties, countervailing duties and safeguard measures), tariffs and export taxes, quantitative import and export restrictions, other NTBs (e.g. licensing requirements, inspections and price controls), domestic content requirements, discriminatory government procurement measures and export subsidies.

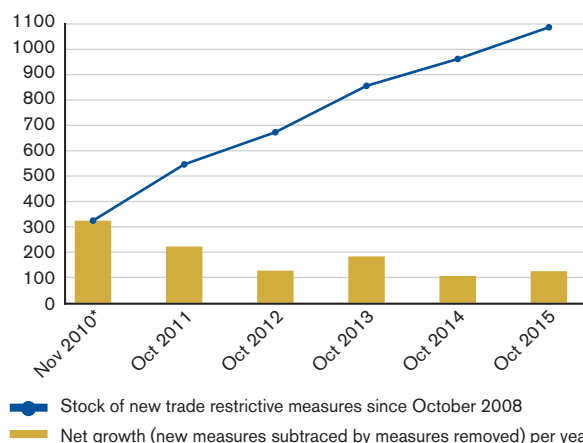
According to the WTO, a total of 1441 trade-restrictive measures have been introduced by the G20 since the 2008 standstill pledge. Of these, 354 had been removed by mid-October 2015. In other words, the remaining stockpile of new trade-restrictive measures was 1087 in their latest report, a figure that represents more than 75 percent of the measures introduced since 2008 (WTO 2015a). This is depicted in figure 1.

Around 60 percent of the stock of new trade restrictive measures shown in figure 1 are trade defence measures. Approximately 20 percent are tariffs and export taxes.

The ratio of new trade-restrictive instruments to removals has improved over time from around 5 to 1 in October 2010 to 3 to 1 in 2015. It is clear from the WTO's monitoring, however, that the G20 standstill pledge has not been honoured.

**Figure 1. Net increase in trade restrictive measures by G20 countries since October 2008**

Number of measures subtracted by measures removed per year



Source: WTO

\*The figure for November 2010 represents all measures accumulated during the first two years of monitoring between October 2008 and October 2010.

In another report with greater geographic coverage, the WTO reports that since 2008, 2557 trade-restrictive measures, including trade defence measures, have been introduced. 642 of these had been removed since 2008 while 1915 remained in place in October 2015. As for the G20, around 75 percent of the trade-restrictive measures introduced since 2008 have not been removed among this wider group of countries (WTO 2015b).<sup>4</sup>

#### The Global Trade Alert

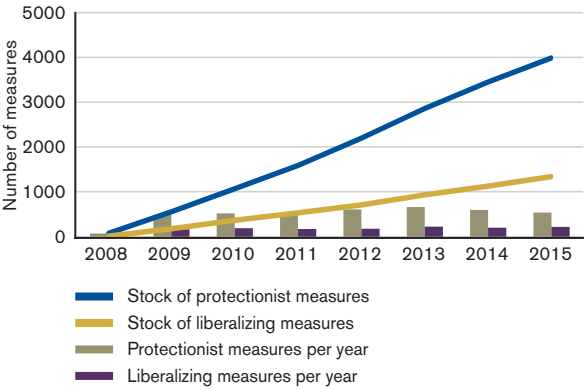
The GTA database also shows a steady increase in protectionist measures since the GFC (figure 2).<sup>5</sup>



By the end of 2015, the total number of measures categorized as protectionist by the GTA, amounted to almost 4000 globally.<sup>6</sup> The graph also reveals how the gap between new protectionist measures and new liberalizing measures continues to grow. The ratio of protectionist to liberalizing measures accumulated globally since the beginning of the GFC, is 3:1.

**Figure 2: Protectionist vs. liberalizing measures**

Number of measures introduced since 2008 and still in force by the end of each year.



Source: GTA

Altogether, more than 80 percent of all G20 discriminatory measures introduced since 2008 remain in force. While this does not tell us the impact on trade, it is evident that G20 governments introduce far more protectionist measures than they remove.

According to our presentation of GTA statistics, the rise of discriminatory measures has been surprisingly steady over the past few years. While Evenett and Fritz (2015a) report three phases of protectionism after the GFC (a sharp rise directly after the crisis erupted, a decline in 2010-2012, and again rising numbers since then), this pattern is not as clear when we look at the number of measures in force at the end of each year. Instead, we observe a steady rise in the total number of discriminatory measures since 2008 as well as a relatively stable ratio (3:1) of protectionist to liberalizing measures.

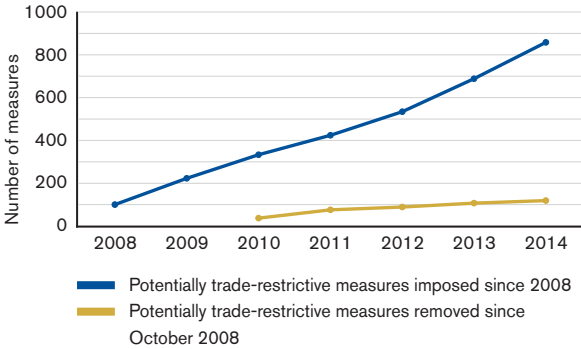
**The European Commission**

The monitoring of potentially trade-restrictive measures by the European Commission reveals a negative overall trend similar to that of the WTO and the GTA (figure 3).

According to the Commission, the pace of removal has worsened considerably in recent years, while the number of new measures has continued to increase sharply. The Commission’s sombre conclusion is that “protectionist trends are, once again, well enshrined in the trade policy menus of many countries – some of them members of the G20 – in spite of their formal commitment to fight protectionism.” Ultimately, protectionism has become “business as usual” (European Commission, 2014).

**Figure 3: Potentially trade-restrictive measures imposed since 2008**

Number of new measures excluding trade defence measures. Data on measures removed in 2008-2009 unavailable.



Source: The European Commission

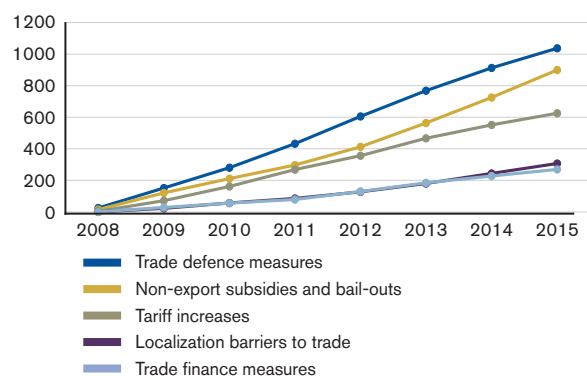
**3.2 The most frequent types of new protectionist instruments**

If we look at the most frequently applied instruments (figure 4), the GTA reports that trade defence measures are used most frequently. Non-export subsidies are also used often and have had a strong growth rate during the period. Traditional tariff increases and localization barriers to trade are also a source of concern due to magnitude as well as growth rate. Finally, according to the GTA database, discriminatory trade finance arrangements also qualify for the top-five category. Together these five instruments represent two-thirds of all protectionist measures that have been introduced since 2008 and are still in force at the end of 2015.

As Evenett and Fritz (2015a) report, localization barriers and non-export subsidies have increased their share of the total number of protectionist measures enacted globally since 2008. Conversely, the share of tariffs and trade defence measures has

**Figure 4: The top five protectionist measures**

Number of measures introduced since 2008 and still in force



Source: GTA

fallen. For other instruments, the share has remained fairly stable since 2008.

In figure 5, we have collapsed some of the categories recorded by the GTA to allow a better overview. Most importantly, we clustered export incentives, non-export subsidies and trade finance measures in one category since they all represent a type of discriminatory subsidy (according to the criteria used by the GTA). When we do that, this category becomes the largest of all discriminatory measures recorded by the GTA.<sup>7</sup>

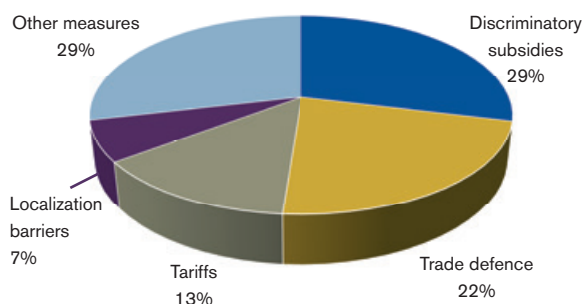
Whereas trade defence measures represented 60 percent of the measures in the WTO's trade-restrictive category for the G20, they only represent 22 percent of the protectionist measures recorded by the GTA globally (figure 5). The main reason for this is the fact that the GTA records a much wider range of discriminatory measures.

Another traditional instrument, tariffs, represents 13 percent of GTA measures. Localization barriers to trade is the fourth-largest category, representing 7 percent of the total discriminatory measures. The remaining categories, indicated as "other measures" in figure 5, represent shares between 0 and 5 percent. The measures that make up more than one percent are, in declining order: investment measures, export taxes and other export restrictions, public procurement measures, sub-national government measures, migration measures, other non-tariff barriers (e.g. licensing requirements), and quantitative import restrictions.

In the following, we analyse the most important trade policy instruments affecting trade in goods.

**Figure 5: Distribution of protectionist measures**

Percent of total



Source: GTA

First, we discuss the most common discriminatory trade measure of all – tariffs. Next, we compare the importance of tariffs and non-tariff barriers (NTBs). We then analyse some prominent NTBs individually, including quotas, export restrictions, trade defence instruments, subsidies, state enterprises, competitive devaluation, domestic content requirements and barriers to public procurement. TBT and SPS measures (not shown in figure 5) are also analysed in sections 3.4.9 and 3.4.10. A special section is devoted to agricultural goods (section 3.5). Finally, in section 3.6 we make an overall assessment of cross-country differences and in 3.7 we discuss trade effects. Barriers to services, investment, the movement of persons and data flows are treated separately in sections 4-7.

We do not include a special section for trade procedures since most trade procedures that could be used for protectionist purposes are included through the treatment of different types of NTBs.

### 3.3 Tariffs

The most common instrument to limit imports is tariffs. During the GATT era (1947-1994), tariff negotiations were at the centre of each round of multilateral trade negotiation. As a result, tariffs for industrial goods were reduced from 20-30 percent after World War II to under 9 percent globally and below 4 percent among OECD countries by 2014.<sup>8</sup>

Figures 6 through 16 illustrate developments during the past 20 years regarding tariffs for all goods globally as well as for individual countries

referred to in the text. The data was collected using the World Integrated Trade Solution (WITS). In this case, data was drawn from UNCTAD’s Trade Analysis Information System (TRAINS).

For the purpose of this analysis, we use mainly the simple average applied most favoured nation (MFN) tariff rate. Another option would have been to report trade-weighted average tariff levels. As frequently pointed out, however, imports that are subject to high tariff rates are likely to be small and will therefore receive small weights in an import-weighted aggregation. This would underestimate the restrictiveness of those tariffs. In the extreme case, goods subject to prohibitive tariffs have the same weight – zero – as goods that receive tariff-free treatment.

Another reason for using a simple average tariff measure is the fact that we are primarily interested in measuring changes in tariff rates over time. Therefore, we wish to eliminate changes in average tariffs levels that merely reflect changes in trade volumes.

Bearing these considerations in mind, the reader should know that the simple average MFN applied tariff level also does not give us the whole picture since it gives too much weight to tariff lines with little trade.<sup>9</sup>

In order to show the preference margin embedded in the tariff structure of many countries, we also report “effectively applied tariff rates” for the EU, the US, Japan and Canada. This measure takes into account not just the applied MFN tariff but also all preferential duties. One problem with this measure that should be kept in mind, however, is that when it calculates the average tariff level WITS applies the lower tariff level of a preferential agreement, regardless of whether an imported good qualifies for preferential treatment or not.

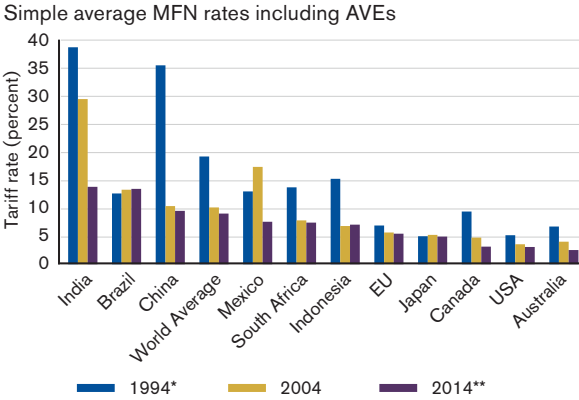
For all figures, we use so-called *ad valorem* equivalents (AVEs) calculated by UNCTAD in order to account for duties that are not related to the import price of a product. This is particularly important for agricultural products, to which specific duties based on physical units such as kilos or litres are frequently applied.

The picture that emerges from our WITS-based analysis is that tariff levels fell broadly during the mid-1990s around the conclusion of the Uruguay Round, but have since levelled out in many countries. Over the last ten years the simple average tariff level decreased by about one percentage point

globally. By comparison, it dropped by almost ten percentage points during the ten-year period before that (1994-2004). This is partly a result of tariff liberalization agreed during the Uruguay Round, under the ITA and in the context of WTO accession agreements. Unilateral liberalization has undoubtedly also played a role, however. For instance, least developed countries, which did not liberalize in the context of the Uruguay Round or the ITA, display the same trend between 1994 and 2014 as countries that made tariff liberalization commitments during the Uruguay Round (figure 7).

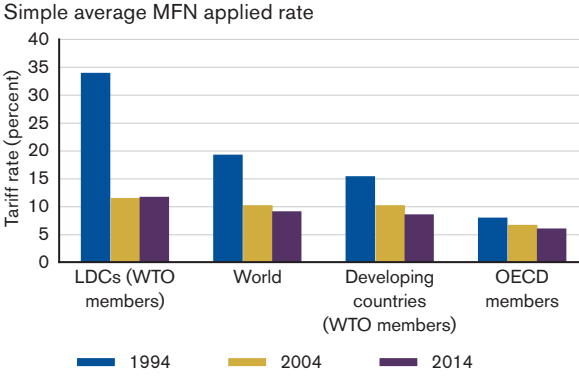
This levelling out trend is visible for many of the countries shown in figures 6-16, including the EU, the US, Japan, China, South Africa and Indonesia. It applies to both developed and developing countries (figure 7).

**Figure 6: Tariff levels for selected G20 economies**



Source: WITS/TRAINS  
 \*Or closest available succeeding year  
 \*\*Or closest preceding year

**Figure 7: Tariff levels for groups of countries**



Source: WITS/TRAINS





One explanation for the levelling-out trend could be a lack of results in the DDA. However, when we compare effectively applied tariff rates – taking into account preferential arrangements – with MFN averages, we see a similar pattern. For the EU and Japan, effectively applied tariff rates have been largely unchanged for more than ten years. For the US and Canada, effectively applied rates have gone down but the gap between MFN rates and preferential rates (the preference margin) has not widened. Judging from these figures, trade agreements do not appear to have produced much trade liberalization even on a preferential basis in recent years. One potential explanation for this is the fact that many recent FTAs involve developed countries that extend preferences to partner countries that the partners already have under previous arrangements. There is, for instance, considerable overlap between EU preferences to least-developed countries under the European Partnership Agreements, the Everything But Arms (EBA) initiative and the previous Cotonou Agreement. There are, however, also a range of bilateral and regional trade agreements that are either under negotiation or have been concluded very recently, that might produce trade liberalization over the next ten-year period. It is furthermore important to keep in mind that the value of trade negotiations lies not only in actual trade liberalization but also in greater predictability when countries bind themselves to the mast.

Another potential explanation for the levelling out trend is a growing perception that countries must maintain tariffs in order to use them as “bargaining chips” in future negotiations (whether regional or multilateral). If trade negotiations (such as the DDA, TTIP, EU-MERCOSUR, EU-Japan or

EU-India) fail to materialize, trade negotiations will eventually become counterproductive since they prevent countries from pursuing unilateral tariff reform. Ultimately, it means that countries maintain even low tariffs for far too long.

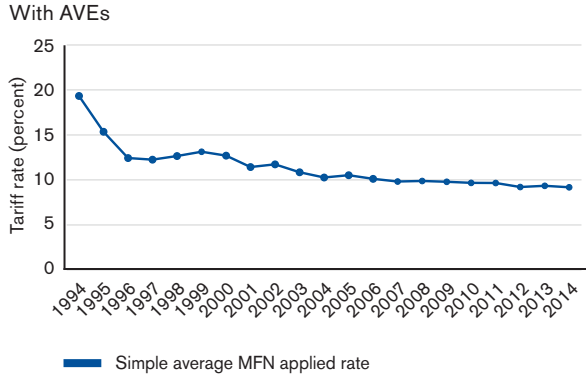
In some countries such as Canada and Mexico, however, tariffs have continued on a downward trend since the GFC. By contrast, Brazil and Japan have neither liberalized nor raised tariffs much at all during the past 20 years.

For some countries (India, Brazil and Mexico), we have plotted average bound MFN rates to illustrate the point that WTO tariff bindings do not influence applied tariffs for many emerging economies. In other words, the development we see over the past twenty years for these countries has been mostly unilateral in nature. For developed countries, bound rates usually follow applied rates much more closely.

Over the past 20 years, the two largest emerging economies – India and China – have liberalized significantly. Again, however, the major part of this development did not occur recently. In the case of India, tariff liberalization was largely unilateral since bound tariff levels from the Uruguay Round have been considerably higher than the applied rates. In the case of China, WTO accession in 2001 is likely to have played an important role in reducing tariffs.

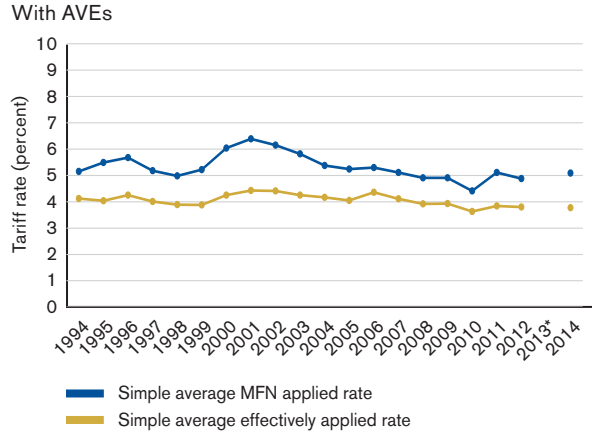
While many developing countries have liberalized during the past 20 years, tariff levels still remain higher in developing countries than in developed countries. In 2014, the OECD simple average was 6.1 percent compared to 8.6 percent for developing countries in the WTO and 11.8 percent for the least-developed countries in the WTO (figure 7).

**Figure 8: Global tariffs for all goods**



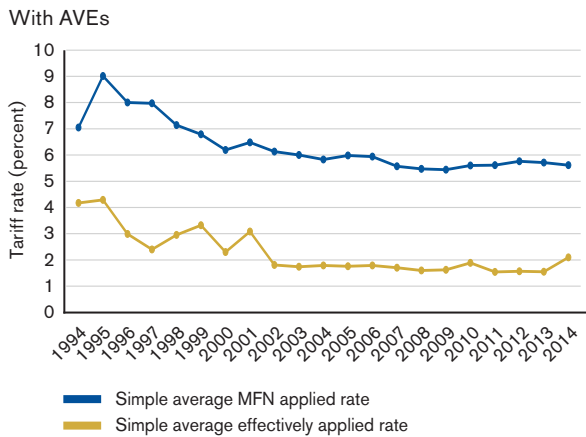
Source: WITS/TRAINS

**Figure 11: Japan - tariffs for all goods**



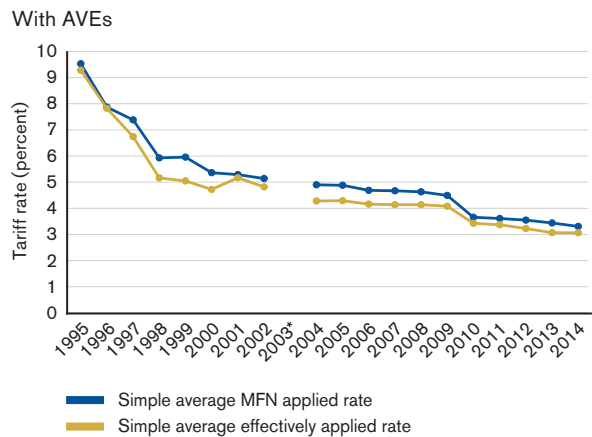
Source: WITS/TRAINS  
\* WITS data unavailable or unreliable

**Figure 9: EU tariffs for all goods**



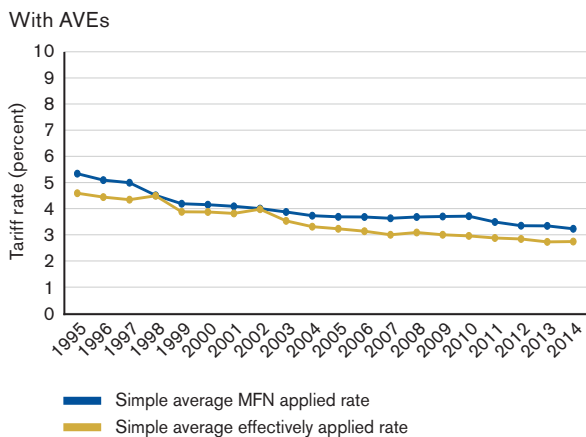
Source: WITS/TRAINS

**Figure 12: Canada - tariffs for all goods**



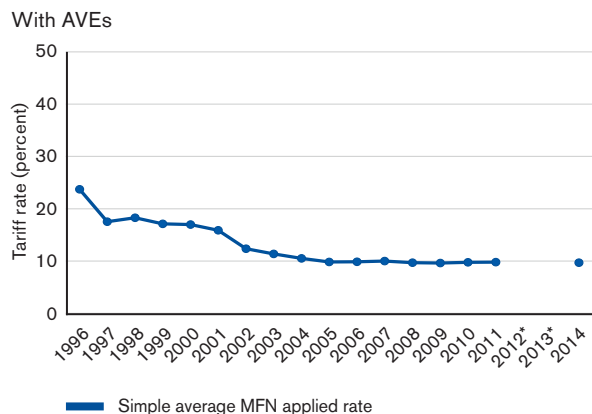
Source: WITS/TRAINS  
\* WITS data unavailable or unreliable

**Figure 10: US tariffs for all goods**



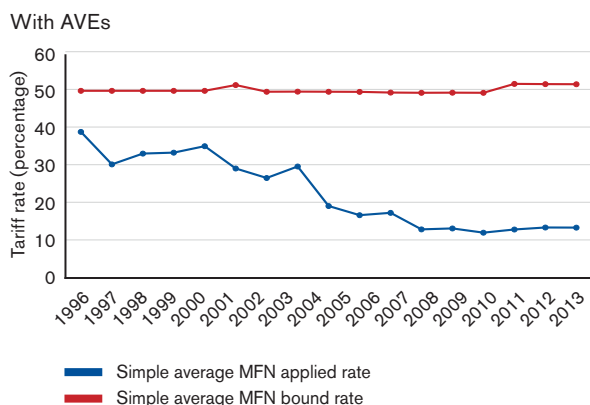
Source: WITS/TRAINS

**Figure 13: China - tariffs for all goods**



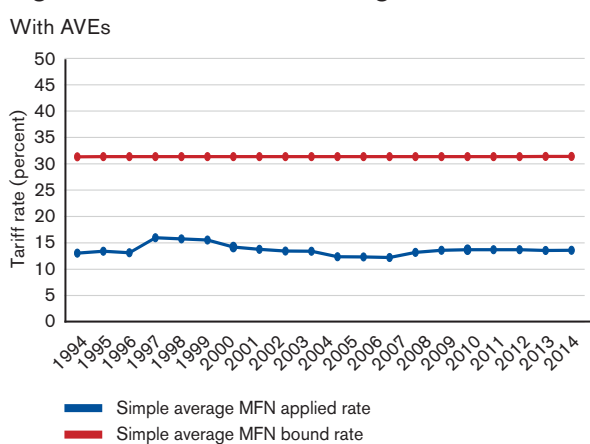
Source: WITS/TRAINS  
\* WITS data unavailable or unreliable

**Figure 14: India - tariffs for all goods**



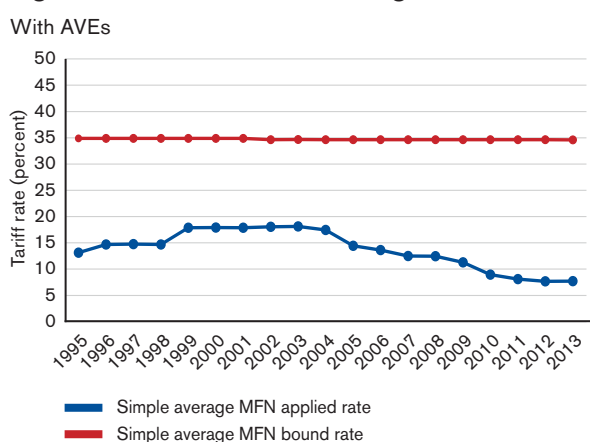
Source: WITS/TRAINS

**Figure 15: Brazil - tariffs for all goods**



Source: WITS/TRAINS

**Figure 16: Mexico - tariffs for all goods**



Source: WITS/TRAINS

### 3.4 Non-tariff barriers

As the name indicates, non-tariff barriers are trade barriers other than tariffs, including quantitative restrictions, licensing requirements, trade defence measures, subsidies, domestic content requirements, discriminatory treatment in government procurement, etc.

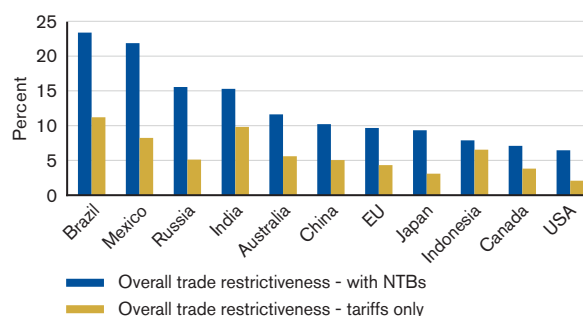
#### 3.4.1 Tariffs vs. non-tariff barriers

To analyse NTBs and to facilitate a comparison with tariffs, we use the World Bank Overall Trade Restrictiveness Index (OTRI). While it does not capture all NTBs, it allows a comparison between tariffs and more than 30 NTBs. The OTRI calculates the (hypothetical) uniform tariff level that would leave imports unchanged under the current level of overall restrictiveness.

According to Kee et al. (2009), NTBs add 87 percent on average to the trade-restrictiveness imposed by tariffs. Despite the importance attached to NTBs in recent trade negotiations, tariff protection thus still accounts for more than half of the overall protection for trade in goods. However, in 34 of the 78 countries investigated, the contribution of NTBs to the overall level of restrictiveness was higher than the tariff contribution. In general, NTBs are *relatively* more important in the overall trade-restrictiveness of developed countries. This is the case for several large OECD economies, such as the EU, the US, Japan, Australia and Mexico. NTBs also appear to add considerably to the overall trade-restrictiveness of non-OECD countries, such as China, Brazil and Russia. Other large countries that are particularly restrictive, according to the OTRI, are Tanzania (54 percent), Egypt (34 percent), Nigeria (32 percent) and Malaysia (29 percent).

**Figure 17: Overall trade restrictiveness for trade in goods**

Protection expressed as the hypothetical uniform tariff level that would leave imports unchanged under the current level of overall restrictiveness. Year: 2009



Source: World Bank



### 3.4.2 Quantitative import restrictions

The GATT bans quantitative restrictions since 1948.<sup>10</sup> Some exceptions apply to agricultural products and commodities, however. For a long time, textile and clothing were also exempted from the ban.

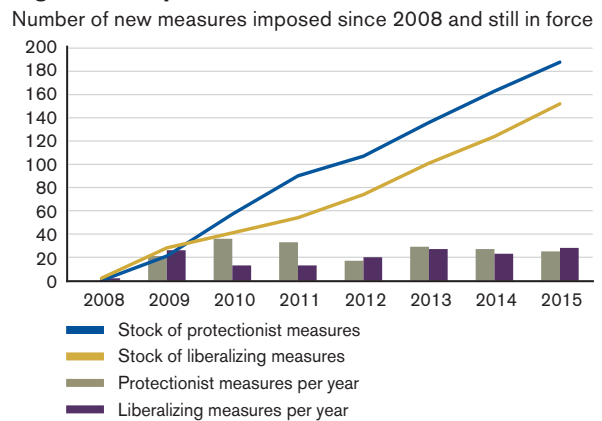
The GATT founders' reason for treating quantitative restrictions differently from tariffs is that quantitative restrictions are more detrimental to trade. Tariffs function as a tax that makes imports more expensive without directly preventing them. Quantitative restrictions, on the other hand, require some type of administrative allocation of the permitted level of imports, typically a licensing system. The allocation of quotas through licences tends to be less transparent and more prone to corruption. It also creates larger market distortions than tariffs.

As mentioned, trade in textiles and clothing was an exception during the GATT era despite the fact that quotas were initially intended to be temporary. The Uruguay Round resulted in the signing of a new Agreement on Textiles and Clothing, stipulating the abolishment of all quotas within ten years. Compliance with this agreement has been good. In principle, all quotas were abolished by 2005, and in 2008, even the safeguard measures that applied to China were removed.

### 3.4.3 Export restrictions

Like quantitative import restrictions, quantitative export restrictions are banned by GATT's article XI. By contrast, export taxes are not bound at the WTO (which also contrasts with the strict regulation of import tariffs).<sup>11</sup> According to the GTA, the rate of growth for new export taxes or quantitative export restrictions has remained largely constant since the GFC (figure 18).

**Figure 18: Export taxes or restrictions**



Source: GTA

The OECD (Fliess and Mård, 2012) conclude that export measures are pervasive in the minerals and metals sector. For waste and scrap metals, the number of measures increased by 28 percent between 2009 and 2010 alone. They also report that non-automatic export licences, export taxes and export prohibitions are among the leading measures used to restrict exports.

The European Commission (2014) paints an even more alarming picture, reporting a resurgence of measures restricting exports, particularly for raw materials. The Commission writes that “conditions of access to natural resources can and are deteriorating quickly”. They conclude that “the intensification of such a trend is particularly alarming as all countries are globally dependent on each other’s natural resources.”

### Example

#### Export restrictions in Argentina

For a long time, Argentina imposed export taxes on most of its exports. Until recently, a 35 percent export tax applied to soybeans, 30 percent to sunflower seed oil and 23 percent to wheat, for instance. Other export taxes included beef, at 15 percent, as well as poultry, pork, apples, pears and wine, at 5 percent. The export tax for iron ore was 10 percent. In April 2014

Argentina also banned exports of iron and steel scrap in an attempt to ensure domestic supply.

In a recent policy reversal, however, Argentina’s new president, Mauricio Macri, eliminated export taxes for almost all products. The main exception is soybeans, for which the rate was reduced by 5 percentage points to 30 percent.

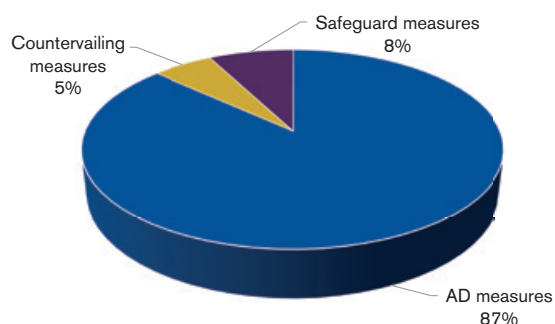


### 3.4.4 Trade defence measures

There are three types of trade defence instruments: antidumping (AD) measures, countervailing measures and safeguard measures. AD measures represented 87 percent of all trade defence measures in force at the end of June 2015.

**Figure 19: Distribution of trade defence measures**

Measures in force by 30 June 2015



Source: WTO

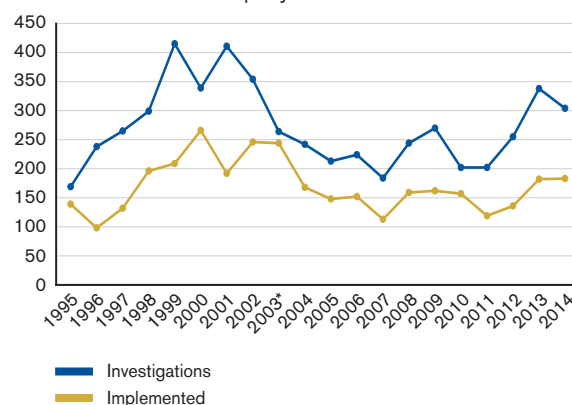
AD measures are applied against imports sold at a price lower than the price charged by the exporter in its own home market. To be classified as “dumping” the lower export price must also result in “material injury” for the domestic producers of the importing country. Many countries argue that AD measures are necessary to counter “unfair” trading practices. The WTO’s Anti-Dumping Agreement does not refer to differentiated pricing or dumping as unfair, however. In fact, in most cases price differentiation is a legitimate pricing strategy and non-discriminatory competition laws could be used to address concerns about anti-competitive behaviour.

Countervailing measures are used to offset subsidized imports and safeguard measures are employed against unexpected, large-scale import surges. While AD and countervailing measures are only applied to products from particular countries, safeguard measures cover imports of the product in question from all countries.

Trade defence measures tend to affect only a limited number of sectors. According to Evenett and Fritz (2015), less than 2 percent of world trade has been affected by trade defence measures introduced since 2008. Still, the initiation of investigations and the imposition of duties reduce predictability and increase the cost of targeted goods. The mere fact that an investigation has been initiated typically prompts importers to look for alternative suppliers.

**Figure 20: Trade Defence Measures**

Number of new measures per year

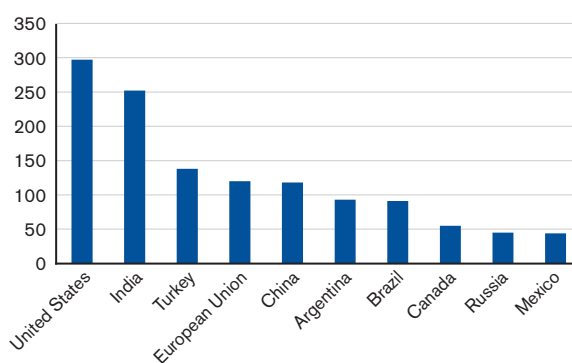


Source: WTO

As shown in figure 20, there has been no obvious upward or downward trend since 1995 in the number of new trade defence measures per year. If we go further back than 1995, however, there has been a rise in the number of countries that use trade defence measures and a geographical broadening of their application.

**Figure 21: Trade Defence Measures**

Measures in Force by 30 June 2015



Source: WTO

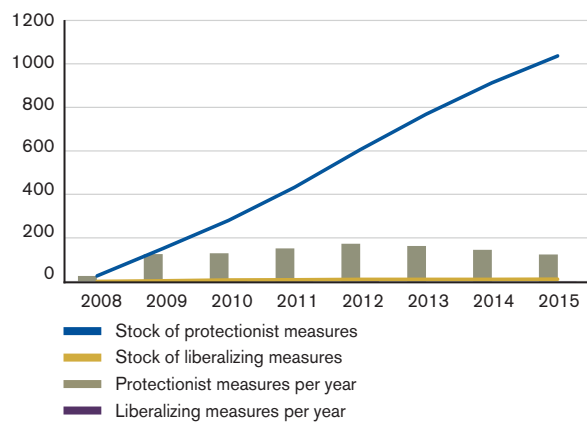
The G20 applies almost 90 percent of all trade defence measures with the US and India as the most active users (figure 21). Together, the ten countries shown in figure 21 apply 77 percent of all measures currently in force. Two groups – the five BRICS countries and a group of traditional developed-country users (the US, the EU, Canada, Australia and Japan) – impose about one third each of the trade defence measures currently in force. Among developed countries, Japan, with only four measures in force, is the least active.

Even though the number of trade defence measures has remained relatively stable in recent years, more countries use them now than 20 years ago and several countries are in the process of introducing trade defence regulation.

The GTA reports that in recent years new trade defence measures have vastly outnumbered liberalizing measures (figure 22). To some extent, these numbers mirror the trend from 2010 and onwards shown in figure 20 with respect to trade defence investigations. At the same time, Evenett and Fritz (2015) report that they have discovered 25 percent more measures compared to the WTO since 2008 in an apples-for-apples comparison. This is disconcerting, given the fact that, in theory, the WTO is supposed to maintain strict notification and transparency requirements for trade defence measures.

**Figure 22: Trade defence measures**

Number of measures imposed since 2008 and still in force



Source: GTA

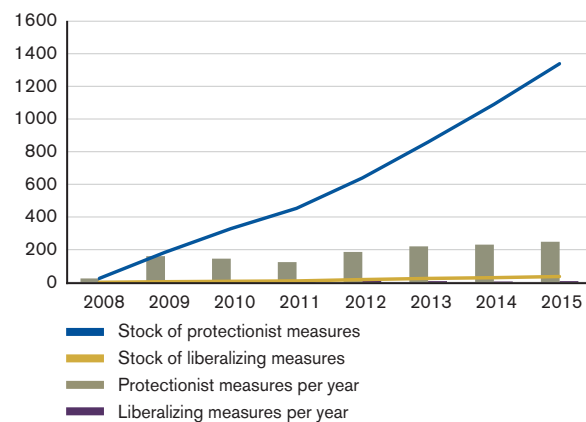
### 3.4.5 Subsidies for manufactured goods

Many countries support parts of the private sector through state aid measures (including bail-outs), export credit measures and export incentives. This was especially significant during and after the GFC. The primary objective was to avoid a collapse in trade due to limited access to credit. These support packages were mainly, but not exclusively, directed at the financial sector and targeted domestic firms.

While such support may have been necessary during the initial credit squeeze, the number of measures has continued to rise significantly since 2008 and exceeds by far the number of liberalizing measures (figure 23). According to the GTA, the ratio of protectionist to liberalizing measures was about 35 to 1 at the end of 2015.

**Figure 23: Discriminatory subsidies**

Number of discriminatory non-export subsidies, trade finance measures and export incentives imposed since 2008 and still in force



Source: GTA

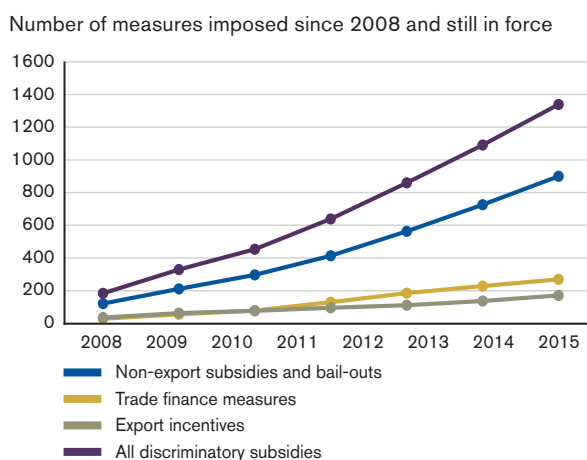
## Example

### Trade defence – targeting the environment

In a recent study, the Board found that EU imports of goods and commodities used in the renewable energy sector, such as solar panels, biodiesel and bioethanol, were disproportionately affected by EU anti-dumping and anti-subsidy measures. According to the study, trade defence measures affecting renewable goods and commodities accounted for an import value of €14 billion, more than 70 percent of the value of all trade affected by EU trade defence measures currently in force. For solar panels alone, the import value (€11.5 billion) was 1.5 times larger than the combined total of all other EU trade defence measures (€8 billion). In addition, the EU has amended the definition of “origin” for solar panels and bioethanol with the purpose of facilitating the imposition of trade defence measures on these products. As a result, EU trade defence measures often contradict its climate policies (Kommerskollegium, 2013; Kommerskollegium 2015a).

As shown in figure 4, two of the top five most common discriminatory measures are non-export subsidies and trade finance measures. When export incentives are added, it becomes the largest category of all discriminatory measures recorded by the GTA (figure 5 and figure 24). What explains this trend and why does the use of different types of subsidies continue to increase?

**Figure 24: Subsidies by category**



Source: GTA

One explanation can be found in the patchy multilateral regulation of subsidies. Subsidies can be categorized in three groups: (1) export subsidies and domestic sourcing requirements, (2) specific subsidies and (3) measures not covered by the WTO's Agreement on Subsidies and Countervailing Measures (ASCM). The first category includes export subsidies and subsidies that require the use of domestic over imported goods. The ASCM bans these subsidies. The second group includes specific subsidies to an enterprise, industry or group of enterprises or industries. This category is prohibited if a complaining WTO Member can show that the subsidy has an adverse effect on its interests. Furthermore, members are allowed to impose countervailing duties to offset subsidized imports that cause injury to the domestic industry.

Subsidies in the third category are not regulated by the ASCM. Consequently, such measures are not a concern from the point of view of WTO legality. However, while a horizontal subsidy provided for an entire sector is not prohibited, it still has the potential to distort markets and trade, particularly if one takes competing sectors into consideration.

The fact that the ASCM covers far from all subsidies that distort markets or discriminate against foreign firms means that it does not ban all subsidized investment loans, subsidized off-shore exploration of raw materials or subsidized energy prices. For example, when natural resources are provided at a subsidized rate to all firms and industry sectors, it is regarded as a horizontal subsidy not regulated by the ASCM. Examples of natural resources that fall into this category are fossil fuels such as gas and oil. The cheap extraction of fossil fuels could give subsidized downstream industries considerable advantages and may therefore distort trade. In addition, fossil fuels are associated with negative externalities through the emission of greenhouse gases.

The absence of international regulation for many types of public support that distort markets or discriminate between domestic and foreign firms, imposes economic and fiscal costs and provokes countries either to start providing their own subsidies or to retaliate with other protectionist measures. From this perspective, the development since 2008 is a source of considerable concern.

*Non-export subsidies* are the most common type of subsidy and they have continued to increase rapidly since the GFC. According to the Global Trade Alert, a total of 172 non-export subsidies in the form of bailouts and other state aid measures were granted globally during 2015 alone. Almost 90 percent of them were imposed by G20 countries. By contrast, none were imposed by least developed countries.

According to the GTA, *trade-finance measures and export incentives* have also grown in importance since 2008. 269 new trade-finance measures and 171 export incentives have been introduced since 2008 with a protectionist to liberalizing ratio of 34:1 and 13:1, respectively.

### 3.4.6 State enterprises

State owned-, state controlled- or state trading enterprises (here "state enterprises") increasingly compete with private firms in global markets. In 2010-2011, 10 percent of the 2000 largest firms on the Forbes' Global List were state owned enterprises. The value of their sales corresponded to almost 20 percent of the value of global cross-border trade in goods and services (Kowalski and Perepechay, 2015). The OECD also provides indications of increased influence, reporting that the

share of revenue from state owned enterprises among Fortune Global 500 firms increased from 6 percent in 2000 to 20 percent in 2011. During the same period, the share of state owned enterprise employment among the largest firms increased from 19 to 30 percent.

State trading enterprises are regulated by article XVII of the GATT. It stipulates that state trading enterprises should respect non-discrimination provisions and that their trade should only be determined by commercial considerations. According to article XVII, members must also notify their state trading enterprises to the WTO annually. State trading enterprises have been the subject of WTO dispute settlement in cases such as *Korea – Various Measures on Beef* and *Canada – Wheat Exports and Grain Imports*.

While state enterprises are not trade barriers per se, they can distort trade if they have negative effects on the competitive environment in which trade occurs. The OECD (forthcoming 2016a) lists the following potential advantages granted to state enterprises by governments:

- Subsidies/tax concessions
- Grants and other direct payments to support R&D, environmental programmes, industrial policies or the provision of public services
- Preferential financing via state-backed institutions
- Privileged access to information
- In-kind benefits such as preferential access to land or infrastructure
- Privileged position in the domestic market
- Credit guarantees
- Exemptions from anti-trust enforcement, anti-competitive behaviour or bankruptcy laws
- Preferential regulatory treatment
- Preferential treatment in public procurement
- Price support
- Preferential access to commercial diplomacy

The GTA records 46 instances of state controlled or state trading enterprises that meet their discrimination criteria. The count is dominated by former Soviet republics such as Russia, Kazakhstan and Belarus. China, a country with a lot of state enterprises, is conspicuously absent in the GTA's count, however.

The OECD is currently engaged in analytical work to determine the impact of state-owned enterprises, the result of which will be available later this year. Ultimately, the policy challenge is to avoid distortionary effects on markets created by state owned enterprises while at the same time avoiding protectionist measures that may be directed at them.

### 3.4.7 Currency manipulation

Currency manipulation as a trade policy instrument means that a country intervenes in the currency market to depress the exchange rate below market value in order to increase its exports. According to GTA data, 10 countries have used this measure with the stated purpose of improving their current account since 2009.

In some cases, currency manipulation undoubtedly creates export advantages to domestic firms. Since production is increasingly organized in international supply chains, however, firms' competitiveness often rely on imported intermediates and overseas production facilities. While exports can become more competitive with an undervalued currency, imported intermediates become more expensive under these circumstances. Today, firms also rely more on local establishment to sell goods and services in foreign markets. A depreciation of the home currency then serves to reduce profits when they are repatriated. In other words, it is not as straight-forward to improve competitiveness through currency devaluation today as it was in the past.

Beyond this, there are basic considerations that have to do with the ability of a country to pursue macroeconomic adjustment policies with a fixed or pegged currency regime. The opportunity cost of currency manipulation as a trade policy instrument can be very high, since other policy instruments (monetary policy in particular) become ineffective when a subset of export-oriented firms, that rely less on imported intermediates and do not supply foreign markets through foreign subsidiaries, become an overall macroeconomic target.

In terms of quantitative estimates, the OECD has published a couple of studies investigating the impact of exchange rates on trade flows. According to Huchet-Bourdon and Korinek (2011), "the large body of existing empirical literature does not suggest an unequivocally clear picture of the trade impacts of changes in exchange rates." They find





the exchange rate effect to be stronger for US-China trade than for trade between the euro area and the US or between the euro area and China. For US-China trade, they find that a depreciation of the US dollar by 10 percent reduces the bilateral trade deficit by \$35 billion or 13 percent. Huchet-Bourdon and Korinek conclude that their study confirms earlier findings in the literature (e.g. Evenett, 2010) suggesting that the exchange rate is only one of many factors explaining the US trade deficit with China. For EU – China trade, a depreciation of the euro by 10 percent was estimated to reduce the EU trade deficit with China by \$9 billion or 7.6 percent. A similar calculation for eurozone trade with the US indicated an increase in the trade surplus by \$20 billion from a 10 percent devaluation of the euro.

In a similar study on New Zealand and Chile, Huchet-Bourdon and Korinek (2012) find that a depreciation of the exchange rate of these two countries would not lead to any strong changes in the trade balance with the US, China or the EU. A depreciation of the NZ dollar is estimated to improve New Zealand's trade balance slightly with China and the US but worsen it slightly with the euro area. For Chile, a 10 percent peso depreciation was estimated to lead to a deterioration of the trade balance with China and the euro Area but to an improvement in relation to the US.

A third (unpublished) OECD study on Sweden, suggests that a 10 percent depreciation of the Swedish krona would lead to a deterioration of Sweden's trade balance with both the euro area (by SEK 34 billion) and the US (by SEK 3 billion, but to an improvement in the trade balance with China (by SEK 2 billion). In other words, the net effect on Sweden's trade balance with the world's three largest economies is estimated to be negative. The authors

discuss potential explanations for this result, which historically would have been regarded as counter-intuitive. Among the explanations they put forward are high price inelasticities for imports and an inability to substitute domestic goods for imported goods. Under such circumstances, a devaluation only serves to increase the import price (and consequently the cost to Swedish firms), without reducing import demand. Another potential explanation discussed in the paper is widespread “hedging” by Swedish traders. In addition to these explanations, the Board has come across anecdotal evidence indicating that Swedish exporting firms tend to draw up contracts in the currency used by their customers.

The Board's overall assessment is that competitive devaluation, while politically contentious, is difficult to apply for protectionist purposes. Its effectiveness can be questioned on several grounds, particularly for small open economies whose firms rely on international supply chains and use channels other than cross-border trade to sell goods and services internationally. At the same time, as underlined by Bergsten (2015), suspected currency manipulation has undoubtedly been a problem in US-China trade relations in the past.

### 3.4.8 Domestic content requirements

The purpose of localization requirements is to force foreign firms to produce or source domestically what they would otherwise produce in or source from another country. From an economic point of view, it is “a government mandated decision to choose a less efficient supplier” (Stone et al. 2015). They include:

- requirements to purchase domestic goods,
- requirements to provide services using domestic facilities or infrastructure

- forced technology or intellectual property transfer as a condition of market access
- subsidies or other benefits that are only received if firms use domestic goods, domestic service providers, or domestically owned intellectual property
- requirements to store data domestically

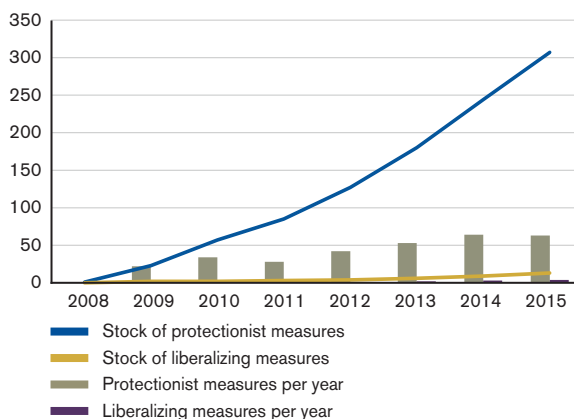
Some localization requirements are banned by the WTO through the Agreement on Trade-Related Investment Measures (the TRIMs Agreement), specifically domestic content requirements (DCRs) listed in the annex to the Agreement.

This section focuses primarily on DCRs for trade in goods. In section 7, localization requirements for data will be covered.

According to the GTA (figure 25), the number of new localization barriers to trade outnumber liberalizing measures since the GFC by a ratio of 16 to 1. The negative trend is also emphasized by the USTR (2015) in its National Trade Estimate Report on Foreign Trade Barriers. In other words, this is an area of considerable concern.

**Figure 25: Localization barriers to trade**

Number of localization barriers to trade imposed since 2008 and still in force

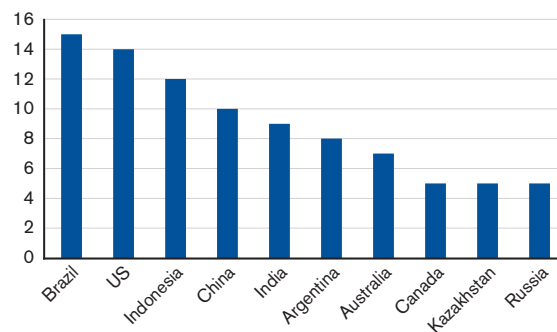


Source: GTA

Hufbauer et al. (2013) identify 117 domestic content requirements implemented world-wide since the onset of the GFC. According to their estimates, these measures have affected more than \$900 billion or five percent of total world trade in goods and services. Very roughly, they estimate that the measures reduce trade by \$93 billion.

**Figure 26: Top ten users of domestic content requirements 2008-2010**

Number of measures



Source: Peterson Institute

The negative trend reported by the GTA and the Peterson Institute<sup>12</sup> is confirmed by the OECD. In a comprehensive report, Stone et al. (2015) identify 140 new localization barriers that have been implemented worldwide between 2008 and 2014. These are categorized in three groups: DCRs for intermediate input markets, DCRs in government procurement and data localization requirements. Only the impact of the first category is analysed quantitatively.

Stone et al. (2015) note that the basic message of the literature on DCRs is that they “cause welfare overall to reduce, with suboptimal allocation of resources worsened in the event of market power by rent-shifting from domestic downstream producers to foreign competitors and domestic upstream producers”. While there are factors that could mitigate these negative effects, for example, learning effects and technology spillovers, there is no evidence that potential benefits outweigh the negative effects. In addition, DCRs may discourage technological transfers by reducing imported inputs and the willingness to invest.

Stone et al. (2015) also perform a computable general equilibrium analysis using the OECD’s METRO model. Due to the fact that their calculation is static and based on only 11 DCR measures in total, the aggregate negative effects on trade and welfare are modest: exports fall by \$11 billion while world household income declines by less than 0.1 percent. Importantly, however, their analysis indicates that exports fall in every region of the world and proportionally more in the countries that apply them.

Surprisingly often, DCRs target renewable energy. Domestic content requirements have been planned or implemented in solar or wind energy in

at least 21 countries in recent years, prompting five of a total of 70 WTO disputes, since 2010 (OECD, 2015a). According to the OECD, such DCRs are harmful to the development of sustainable energy sources. The reason is that they reduce investment in solar power and wind energy, both in the country that adopts them and in other countries.

The negative effects are confirmed by Böhringer et al. (2012) who conclude that removing the DCRs from the government of Ontario's programme for renewable energy would reduce the cost of the programme by 30 percent compared to existing policy.

### 3.4.9 TBT Measures

TBT measures refer to technical specifications that define product characteristics. These technical specifications are motivated by regulatory purposes such as consumer safety and environmental protection.

The WTO's Agreement on Technical Barriers to Trade (the TBT agreement) covers technical regulations, conformity assessment procedures (CAPs) and standards. Technical regulations are legal requirements adopted by public authorities. CAPs determine whether those requirements are met. While technical regulations are mandatory, standards are voluntary documents approved by a recognized body. Standards are developed jointly by various stakeholders as prerequisites for efficient industrial production and technology facilitation.

While most TBT measures are motivated by prudential regulatory purposes, they can also create obstacles to trade. Article 2.1 of the TBT Agreement therefore bans discriminatory technical regulation that accords less favourable treatment to foreign products. Furthermore, article 2.2 obliges members to ensure that technical regulations do not become unnecessary obstacles to international trade.

The TBT agreement seeks to draw a distinction between prudential measures and measures that are unnecessarily trade restrictive. For this purpose, the TBT Agreement requires the notification of technical regulations and the identification of specific trade concerns (STCs). Other members may then make comments or submit questions to the notifying member. STCs are concerns raised by any WTO member in the TBT Committee with respect to other members' TBT measures. The procedure allows information exchange and offers the possibility of mediation. It can also indicate whether dispute resolution may become necessary.

The number of STCs (shown in figure 27) could serve as an indication of protectionist trends in the TBT area. At the same time, an increase in STCs may relate to other factors, such as a growing acceptance among members to use the TBT Committee to resolve TBT related trade issues. It can also be explained by the rise of new regulatory challenges that may have been handled differently among members.

## Example

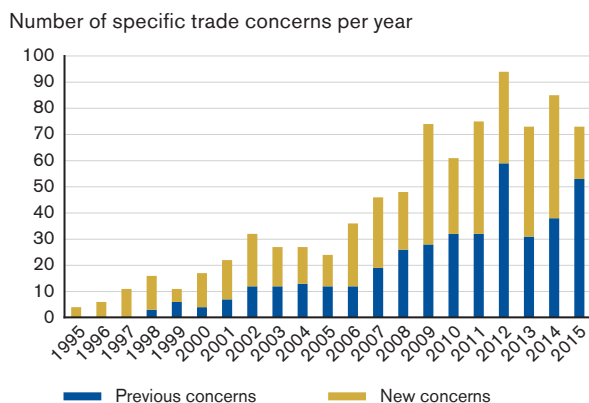
### Domestic content requirements – solar power in India

The Jawaharlal Nehru National Solar Mission is a government programme in India that seeks to promote ecologically sustainable growth and energy security. DCRs have been attached to the programme in order to ensure that solar power in India creates domestic jobs. Under the DCR, developers must therefore use solar cells and modules manufactured in India. Cells and modules are used to build blocks of solar photovoltaic systems that generate electricity. Crucially, however, DCR only apply to photovoltaic systems using crystalline silicon as a material. The competing material – thin film – is exempt from the regulation. As a result, 70 percent of Indian solar photovoltaic systems use imported thin film. Globally, crystalline silicon, with 89 percent of the market, is the dominant material, while only 11 percent of solar developers use thin film. The DCR thus appears to have created a shift in production input from one material to another in India. Calculations by Hufbauer et al (2013) indicate that the increase in cost associated with the use of thin film rather than crystalline silicon corresponds to a 12 percent increase in the production cost of solar modules. Ultimately, the DCRs have distorted the market for solar cells and modules without creating any domestic industry in return (Hufbauer et al. 2013).

Recently, a WTO panel found the Indian measures inconsistent with GATT provisions on national treatment as well as the TRIMs Agreement. According to the panel, the measures could not be justified under GATT article XX (general exceptions).

Changes in the relationship between the number of new vs. previous STCs is also of interest since it indicates the extent to which WTO members agree on whether or not a TBT measure is legitimate.

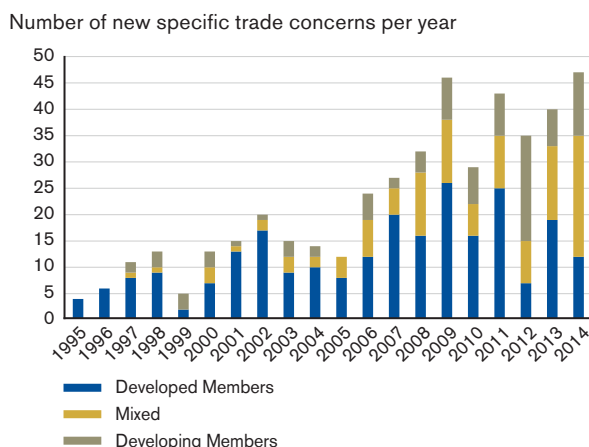
**Figure 27: Specific trade concerns in the TBT committee**



Source: WTO Secretariat. The figure for 2015 does not include STCs from the November 2015 TBT Committee meeting. Previously raised concerns are counted once even if they are raised in subsequent meetings

According to figure 27, the number of STCs has grown since 1995. This development can be explained by an increase in STCs raised by developing-country members (see figure 28). The growth in STCs appears to have slowed down during the last three years, however, and has stabilized at a higher level. Since the share of previous concerns has also gone up during the same period, the Board interprets this new and higher level as an indication that STCs have become increasingly difficult to solve. This, in turn, could indicate an increased level of TBT-related trade barriers.

**Figure 28: Specific trade concerns in the TBT Committee by country groups**



Source: WTO

Many developing countries are in the process of upgrading their regulatory framework, and raising their quality and safety levels. This development may lead to better regulation and less regulatory divergence. Ideally, an increase in the acceptance of international standards could lead to reinforced regulatory convergence. As production becomes increasingly fragmented in international supply chains, there is an ever greater need for a coherent application of international standards.

It is important to note that a general economic and regulatory development among developing countries does not imply improvements for all developing countries. Firms from least-developed countries may face higher barriers due to higher safety levels and more sophisticated standards among industrialized countries.

An issue of growing importance in the TBT context is the development of new technologies and regulatory solutions to borderless challenges such as climate change. It is critical that regulation to address problems in this arena do not get mixed up with protectionist motives as this could ultimately weaken the acceptance of mutually beneficial regulatory solutions.

### 3.4.10 SPS measures

SPS measures are government regulations aimed at protecting the life and health of humans, animals and plants. Countries use SPS measures to ensure food safety and to prevent the spread of contagious animal diseases or devastating plant pests. SPS measures are usually applied to both domestic and imported products and affect trade with live animals, fish, agricultural products, plants, food products and timber.

As long as SPS measures are based on scientific risk assessments, they are not regarded as protectionist. When SPS measures are not based on scientific risk assessments, however, they can potentially be used for protectionist or other political purposes. Measures can be unnecessarily trade-restrictive, discriminate against foreign producers or be subject to excessive inspection or licencing requirements.

To address risks that SPS measures are misused, WTO members have agreed to base SPS measures on scientific evidence and international standards.<sup>13</sup> Members have also committed to transparency provisions that oblige members to notify SPS measures to the SPS Committee and to provide oppor-



tunities for other countries to comment on proposed regulations.<sup>14</sup>

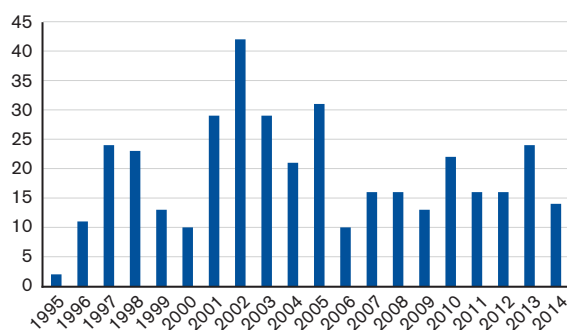
Since 1995 there has been an upward trend in the number of notifications sent to the SPS Secretariat, representing an increase in the exchange of information on SPS measures. In September 2015, a total of 19 000 notifications had been received. The increasing share of notifications from developing countries is particularly evident. Since 2007, their share has been consistently above 50 percent. In 2015 (through September), developing countries' notifications amounted to 70 percent of all notifications.

An increasing number of notifications does not mean that an increasing number of SPS measures restrict trade. On the contrary, an increase in notifications improves transparency, which prevents misuse. In addition, a large share of notified SPS regulations facilitates trade. From September 2013 to September 2014, measures identified as trade-facilitating made up 19 percent of all notified SPS measures (WTO, 2015d).

When a WTO member introduces an SPS measure that is not in line with the SPS Agreement it can represent a disguised restriction on international trade. In that case, the issue may be raised in the SPS Committee. From 1995 to 2014, 382 specific trade concerns were raised in the SPS Committee (WTO, 2015e). The number of new concerns raised each year has been fluctuating (figure 29). Over time, there has not been any trend toward more or fewer concerns despite the fact that more countries have become members of the WTO and that an increasing number of countries notify SPS measures to the committee.

**Figure 29: SPS Measures**

Number of new trade concerns raised in the SPS Committee 1995-2014



Source: WTO



Between 1995 and 2014, developing countries and developed countries have been equally active in raising concerns, as well as in being challenged for measures they maintain. Around 2007–2008, a shift occurred, however. Between 1995 and 2007 developed countries raised more SPS concerns, but since 2008 developing countries have raised substantially more concerns than developed countries.

Between 1995 and 2014, EU measures were challenged most frequently, in the SPS committee. A total of 78 complaints – 20 percent of all concerns – were raised against the EU. This is probably largely due to the high level of food safety, animal and plant health upheld by the EU as well as current work to develop more stringent regulation. Another important factor probably has to do with the fact that the EU is a large market and a desirable export destination for many countries. Similarly, many specific trade concerns have also been raised against measures maintained by the US and Japan. It is also notable that nine concerns have been raised against Russia since it became a member of the WTO in 2012.

Since 1995, 43 WTO disputes – 9 percent of all cases – have cited the SPS Agreement in request for consultation. Members that have seen their SPS measures challenged in these disputes are the EU, India, Indonesia, Korea, Russia and the US. Approximately half of the disputes have been resolved by mutually accepted solutions, or after the adoption of a panel report according to which no further action was required.

Almost 40 percent of the concerns raised in the SPS Committee have been reported as resolved. Although some resolved concerns might not have been reported, this means that a large share of concerns raised in the committee are not being resolved. Ultimately, however, the Board's assess-

## Example

### SPS measures – Indonesia’s port closure on imports of fruits and vegetables

In 2012, the US expressed concerns regarding Indonesia’s plan to close several ports for imports of fruit and vegetables, including the main port of Jakarta. The port closure would prevent 90 percent of all fresh fruit and vegetable exports to Indonesia. The US and a range of other WTO members urged Indonesia to notify the measure to the SPS Committee and provide scientific justification for it.

Indonesia argued that the measure was motivated by threats to the country’s agriculture. Indonesia also referred to its limited ability to perform quarantine and food safety controls. The affected members raised concerns that bringing in fruits and vegetables via ports other than Jakarta would mean longer transports, increasing costs and difficulties in preserving the quality of perishable products. At the same time, imports through the port of Jakarta still occurred for products from some countries, indicating discrimination.

Another rule, requiring a safety licence for imports was also raised as a concern, including restrictions on the volume that could be licenced and imported. China argued that the new requirements seriously affected trade in fruit and vegetables, trade which had been going on for years on the basis of established inspection and supervision systems, without any reported phytosanitary problems.

By early 2016, the issue had still not been resolved.

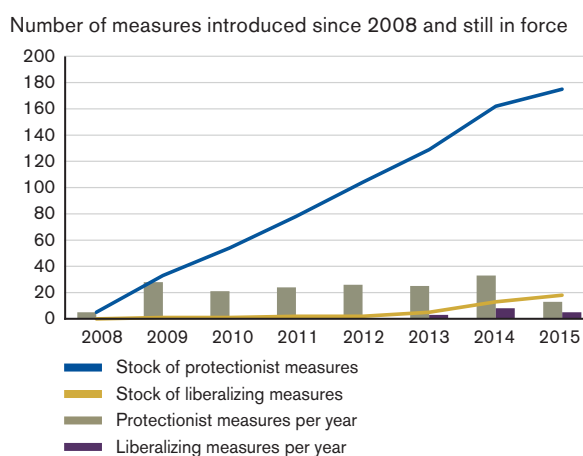
ment is that the SPS Agreement and the SPS Committee have had a preventative effect on the risk that SPS measures become discriminatory or constitute a disguised restriction on international trade.

#### 3.4.11 Government procurement measures

According to the OECD (forthcoming 2016b), the size of government procurement (GP) markets is on average between 11 and 12 percent of GDP, based on a sample of 89 countries. Between 1995 and 2011, GP as a share of GDP increased by about one percentage point.

By the GTA’s count, the number of protectionist GP measures has outnumbered the number of liberalizing measures by a ratio of 10:1 since 2008, indicating a substantial increase in discrimination with respect to public procurement (figure 30).

**Figure 30: Government procurement**

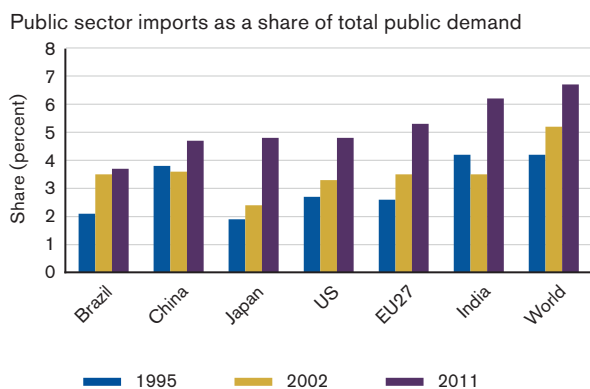


Source: GTA

How does the GTA’s count compare to other analyses and is this part of a longer trend that stretches further back than the GFC? According to Messerlin (2015), import penetration in public procurement markets has increased over time since 1995 (figures 31–32). A dip can be observed for the GFC in 2009 but after that the earlier upward trend picks up again.

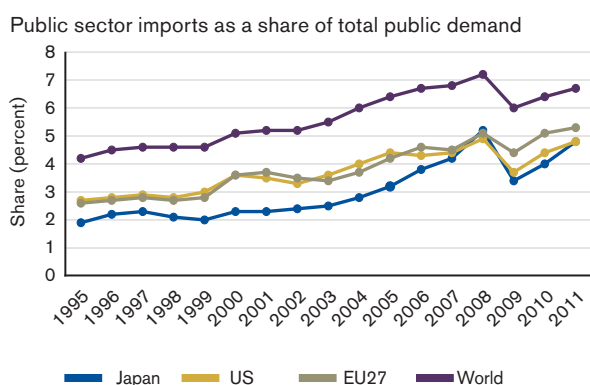


**Figure 31: Government procurement import penetration**



Source: Patrick Messerlin (2015) based on WIOD data

**Figure 32: Government procurement import penetration**



Source: Patrick Messerlin (2015) based on WIOD data

The differences in import penetration between major economies such as the EU, the US, Japan and China are small, a conclusion that is reinforced when Messerlin compares his WIOD-based calculations with calculations based on OECD input-output data.

The OECD (forthcoming 2016b) finds indications of increased discrimination in government procurement since 1995. Their first measure compares the GP import share with the corresponding import share for the private sector as a whole. Private sector purchases are presumed to be non-discriminatory. If that import share is substantially lower for government procurement, it implies discriminatory treatment of foreign suppliers. A ratio of 1 between the GP import share and the private sector import share indicates no discrimination. By contrast, a ratio of 0 - that is when government procurement produces no imports at all - indicates full discrimination.

For all the years under scrutiny, the OECD finds that the ratio of the GP import share to the private sector import share was lower than 1 with a falling trend over time. The median value fell from 0.67 in 2001 to 0.55 in 2011. While a value lower than 1 is what one would expect since GP spending is typically more directed toward non-tradable items, the OECD's calculation indicates a strong home-market bias in public procurement.

According to the same study, developing countries discriminate less against foreign suppliers than developed countries. At the same time, however, the observed increase in discrimination between 2001 and 2011 is more pronounced among developing countries.

The second methodology used by the OECD to analyse discrimination in GP looks at the impact of changes in procurement spending for 72 countries (35 developed countries and 37 developing countries) on overall imports between 1995 and 2012. More public procurement spending changes the composition of aggregate demand in a country. If GP is non-discriminatory, such a change in the composition of aggregate demand would not affect imports negatively. If, on the other hand, GP discriminates against foreign suppliers, one would expect lower imports (all else being equal) as a result of increased GP spending. Again, the approach does not account for the fact that public procurement is more oriented toward non-tradable spending than overall aggregate demand. At the same time, substantial negative effects on imports would indicate discrimination and, in any case, it allows for an analysis of trends over time. There is no reason to expect GP spending to be more biased toward non-tradable goods and services today than 20 years ago. If anything, we should expect the contrary, since more goods and services have become tradable during this period.

Based on this method, the OECD calculates that a one percent increase in GP spending as a share of GDP reduces imports as a share of GDP by 0.82 percent. Typically, that number should range between 0 (= no home market bias in GP) to minus 1 (=all of the shift in aggregate demand goes to domestic goods and services when GP spending increases by one percent). In other words the negative effect on imports observed by the OECD is substantial. Again, discrimination appears to be stronger in developed countries than in developing countries. For developed countries the result was a



coefficient of  $-0.97$ , suggesting close to full discrimination. For developing countries the corresponding coefficient was  $-0.66$ . Perhaps even more troubling, however, is the fact that the home-bias effect increases by 6.4 percent per year between 1995 and 2012. The negative trend over time is somewhat stronger for developed countries (6.6 percent) than developing countries (6 percent).

Altogether, the forthcoming OECD report suggests that discrimination in public procurement is substantial. In addition, it indicates that discrimination has increased over time since 1995. Together with the figures reported by the GTA, the Board views this development as worrying. The European Commission's new proposal to give itself the power to affect competitive price conditions between foreign and domestic tenders in EU public procurement markets (see box below) adds to this concern since it represents a new type of instrument that introduces additional executive discretion in public procurement.

### 3.5 Trade in agricultural goods

According to the World Bank, agriculture represents about 1.5 percent of GDP among OECD economies and a little more than 3 percent of GDP globally, down from 2.5 and 6 percent, respectively, 20 years ago.

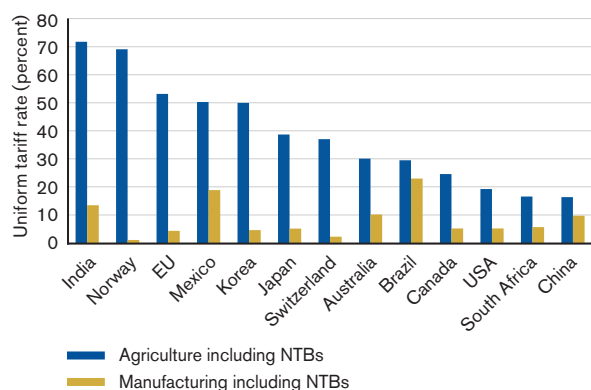
For a long time, public debate on protectionism in OECD economies focused on the agricultural sector. As a result, monitoring efforts for this sector have been around in the OECD since the mid-1980s.

According to the 2015 OECD Agricultural Policy Monitoring and Evaluation report, overall levels of protection in the agricultural sector remain high. Together, the 49 countries monitored transfer an annual \$600 billion from taxpayers and consumers to agricultural producers.

The World Bank OTRI allows us to compare protection in the agricultural sector and the manufacturing sector, including NTBs. As figure 33 indicates, protection remains much higher in the agricultural sector than in the manufacturing sector. The difference is particularly pronounced in markets traditionally associated with agricultural protectionism, such as Norway, Switzerland, Korea and Japan, along with some large agricultural producers, such as the EU and India.

**Figure 33: Overall trade restrictiveness for 2009 in the agricultural and the manufacturing sector**

Protection expressed as the uniform tariff level that would leave imports unchanged at current level of overall restrictiveness



Source: World Bank

#### Example

##### US and EU government procurement regulation

The US Buy American legislation provides for domestic content requirements in government procurement at the federal and state levels for procurements financed with federal funds, primarily in the transport and infrastructure sectors. The provisions usually require that contracting authorities must purchase goods and inputs substantially produced or manufactured in the US. The level of domestic content requirement varies from 60-100 percent.

The EU currently does not have comparable discriminatory elements in its government procurement legislation, but the European Commission recently tabled a proposal that restricts access to EU government procurement markets for third countries. According to the proposal, the Commission may decide to apply price adjustment measures to tenders originating in targeted non-EU countries. The price adjustment measure is to be applied in the evaluation phase of the procurement and implies an artificial addition to the price of up to 20 percent of the tender value. The proposal thus gives the Commission discretion in adjusting competitive conditions in EU government procurement markets. An important purpose of the proposal is to give the Commission additional leverage in trade negotiations in order to open up third country government procurement markets for EU firms.

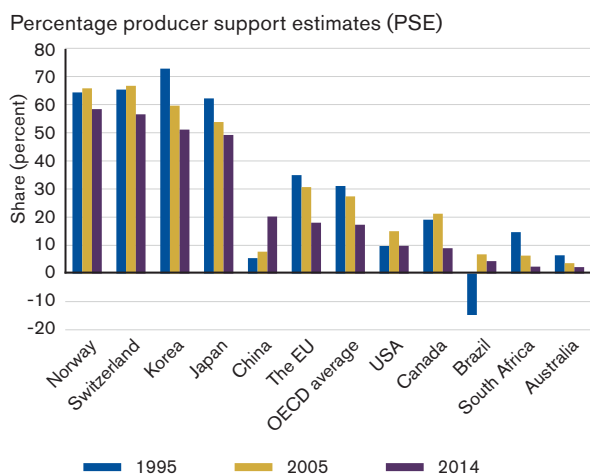
## Agricultural support

Below, we use OECD statistics on so-called Producer Support Estimates (PSE) as a share of farm income to analyse support to agricultural producers. Percentage PSE represents the share of total farm incomes that comes from public policies. The support is transferred from taxpayers (direct payments and tax rebates) and consumers (market price support).

In many developed economies, agricultural reforms have had an impact on agricultural support in recent years. For all 49 countries monitored by the OECD, the PSE share of farm income has fallen from 21 percent in 1995-1997 to 17 percent in 2012-2014. Average numbers mask big cross-country differences, however. While PSE shares have fallen among OECD economies, they have begun to rise in some of the 8 emerging economies monitored by the OECD, particularly in China. In 2014, the level of income support to farmers converged at 17 percent in both OECD economies and the 8 emerging economies.

As figures 35 and 36 indicate, there has been a falling trend in agricultural support among OECD economies over the past twenty years. The average share of farm income that comes from public support has fallen from 31 percent in 1995 to 17 percent in 2014, in other words by 45 percent. Compared to other economic sectors, however, substantial subsidies remain in place. Agricultural support has been reduced, particularly in the EU and Canada. The level of support has been reduced by almost 50 percent in the EU and almost 60 percent in Canada.

**Figure 34: Producer support as a share of farm income**



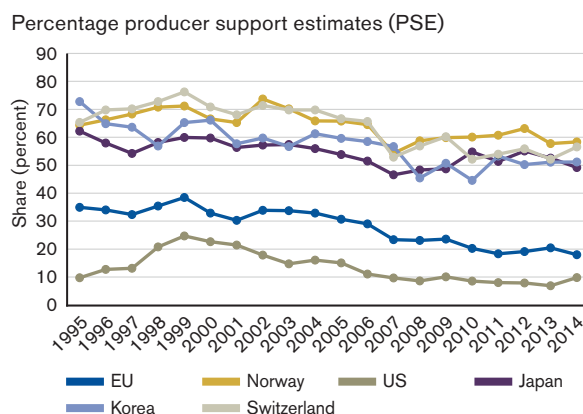
Source: OECD

since 1995. According to figure 34, however, protection has been reduced less proportionally in economies such as Norway, Switzerland and Japan. In 2014, Norway had the world's highest agricultural support in relation to farm incomes. On average, 58 percent of farm income still comes from government policies in Norway, down from 64 percent twenty years ago.

Since the GFC, the average downward trend has continued. At the same time, however, the top subsidizers, Norway, Switzerland, Korea and Japan, appear to have levelled off in terms of their reform efforts (figure 35). The same appears to apply to the US.

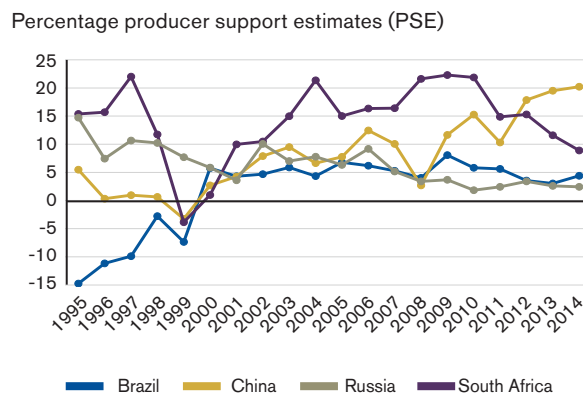
If we look at the same measure for the BRICS countries minus India,<sup>15</sup> we notice an upward trend for China (figure 36). In fact, in 2014 China's level of agricultural support (20 percent) was for the first time larger than that of the EU (18 percent).

**Figure 35: Producer support as a share of farm income – OECD economies**



Source: OECD

**Figure 36: Producer support as a share of farm income – emerging economies**



Source: OECD

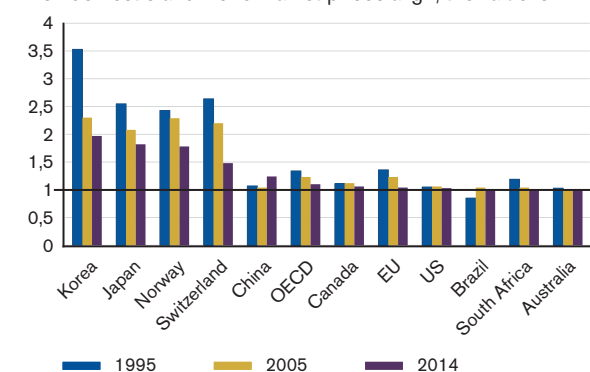
### Reduced market distortion

Over time, progress has also been made in moving away from more market-distorting policy instruments, such as market price support and input subsidies, towards instruments that are decoupled from production. On average, the share of the most trade distorting forms of support has been reduced from 86 percent (1986-1988) to 53 percent (2012-2014) within the OECD. Again however, progress is slow in OECD countries that have a high level of support to begin with. In addition, some emerging economies have increased their use of price- and production-linked support policies. Across all 49 countries, two-thirds of support to farmers is still linked to prices, output etc. (OECD, 2015b).

The OECD measures the degree of market distortion by comparing the difference between output prices received by farmers domestically to world market prices. This measure, called the nominal protection coefficient, indicates that market distortions have been reduced in many countries (figure 37). Significant gaps between domestic and international price levels remain in Korea, Japan, Norway and Switzerland, however.

**Figure 37: Ratio between domestic and world market prices in the agricultural sector**

When domestic and world market prices align, the value is 1



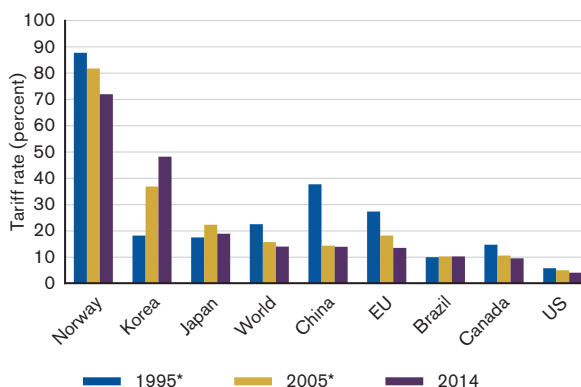
Source: OECD

### Agricultural tariffs

For agricultural tariffs, the overall impression is that little agricultural tariff liberalization has occurred during the past decade (2004-2014). Some economies, such as the EU and Norway, have reduced tariffs somewhat, whereas others, such as Korea, have increased agricultural tariffs. For most countries, however, there has been little change over the last decade.

**Figure 38: Agricultural tariffs for selected economies**

Simple average MFN applied rate



Source: WITS/TRAINS\*\*

\*Rates for the closest succeeding year were used when data was unavailable  
\*\* The Board's selection of agricultural tariff lines is available upon request.

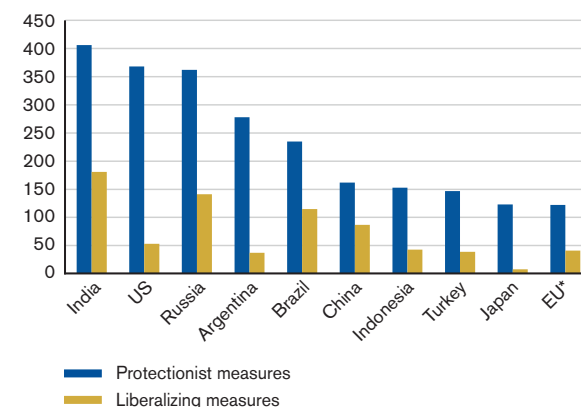
## 3.6 Cross-country observations

Which countries impose the most protectionist measures for trade in goods? According to the World Bank's overall trade-restrictiveness index (figure 17 on page 21), countries such as Brazil, Mexico, Russia and India are particularly trade-restrictive.

The European Commission (2014) paints a similar picture. Argentina, Russia, Indonesia, Brazil, China and India figure most prominently in their count. Together, these countries account for almost two thirds of all potentially trade-restrictive measures recorded by the Commission since October 2008.

**Figure 39: Protectionist vs. liberalizing measures - top ten countries since 2008**

Number of measures



Source: GTA

\*Without measures under member state competence

This impression is confirmed by the GTA (figure 39), which adds the US to this category. Countries such as the US, Argentina and Japan also have a very high ratio of protectionist to liberalizing measures. In the case of Japan the ratio is as high as 15:1 for the period. Here, we have not included measures under EU member state competence, however. If we do that the EU numbers go up substantially.

### 3.7 Trade effects

The number of new trade-restrictive/protectionist measures reported by the WTO, the GTA or the European Commission does not give us the full picture since it does not measure the size of trade affected by the various measures. Neither does it take into account the growth rate of new protectionist measures during the period leading up to the GFC. In other words, it is possible that the negative overall trend shown in figures 1 through 3 started before the GFC.

There have been surprisingly few studies that analyse the trade impact of protectionist measures in recent years. As part of its monitoring efforts, however, the WTO reports that six percent of G20 imports are affected by G20 measures introduced since 2008 (WTO, 2015a).

In a computable general equilibrium (CGE) analysis based on around 40 percent of the trade-restrictive measures recorded by WTO trade monitoring, the OECD calculates that world exports have been reduced by 0.2 percent as a result of the new trade-restrictive measures. The analysis thus indicates a modest negative impact on trade. On the other hand, it is a static analysis that covers only 421 G20 measures in total. This represents less than ten percent of the number of protectionist measures introduced worldwide since October 2008, according to the GTA database.

Henn and McDonald (2014) base their study on protectionist measures reported by the GTA. They conclude that, for the first phase after the GFC (between July 2008 and April 2010), “trade in country pairs subject to new border measures decreased by 5-8 percent relative to trade in the same product

among pairs not subject to new measures.” Altogether world trade decreased by 0.2 percent as a result of the observed measures. As the study is based on early post-crisis data, however, it might not show us the full impact of the protectionist measures introduced after the crisis.

Using the World Bank OTRI to measure trade-restrictiveness, Kee, Neagu and Nicita (2013) conclude that there was no widespread increase in protectionism between 2008 and 2009 as a result of the GFC. While the rise in tariffs and antidumping duties “may have caused global trade to drop by US\$43 billion, it explains less than 2% of the collapse in world trade during the crisis period.” Kee, Neagu and Nicita include only two instruments, tariffs and trade defence measures, in their analysis, however. In addition, they only calculate effects between 2008 and 2009.

Evenett and Fritz’ (2015b) analysis of the trade impact of new protectionist measures on the exports of least developed countries (LDCs) indicates a considerably larger impact. According to their study, the total amount of foregone LDC exports caused by measures implemented between 2009 and 2013 is \$265 billion or almost one third of the total value of LDC exports during this period.

Altogether, available quantitative analysis suggests that trade has been negatively affected by protectionist measures introduced since the GFC. So far, however, most analysts attribute the slowdown in world trade in recent years to factors other than increased protectionism, notably falling energy prices, demand-driven cyclical factors and structural factors related to a retrenchment of international supply chains.<sup>16</sup> Evenett and Fritz (2015a) recently cast doubt on these interpretations, however, observing that there has been a disproportionately large fall in global trade in products on which G20 economies have imposed trade restrictions.

Until recently, there has been little reliable data that can be used to estimate trade protection and its effects comprehensively. Now, that is beginning to change. An important next step would be to assess the trade impact of current protectionism more systematically.



## 4. Trade in Services

Cross-border trade in services is growing rapidly, reaching \$4.9 trillion globally in 2014, about 25 percent of global merchandise trade (WTO, 2015a). In value-added terms, the share of services in total gross exports is even larger, approaching 50 percent among OECD economies. Moreover, services account for 80 percent of employment and 75 percent of GDP in OECD countries (OECD, 2014).

### The OECD STRI

In order to assess barriers to trade in services, the OECD has developed a services trade-restrictiveness index (STRI). The OECD STRI originally covered 40 countries and 18 sectors. In 2015 it was extended by the addition of logistics services. The index ranges from 0 to 1, where 0 is the most open and 1 the most restrictive. So far, the OECD STRI database contains data for two years, 2014 and 2015.<sup>17</sup>

The OECD STRI standardizes barriers to trade in services into a single metric that makes comparisons between sectors and countries possible. In the long term it also paves the way for comparisons over time. The changes between 2014 and 2015 are so small, however, that for this report we focus our presentation on cross-country and sectoral analysis.

### The World Bank STRI

The World Bank STRI follows a similar basic logic and also constructs a single measure of overall restrictiveness. Since its publication in 2012, it has not been updated with additional years.<sup>18</sup>

When we compare the OECD STRI with the World Bank STRI below, the reader should keep in mind that they measure different things for different years. In fact, there is quite a large discrepancy even within sectors between the individual measures that make up the basis of the two indices. The thing that they have in common, however, is that they both refer to restrictions on trade in services and that restrictions are standardized to form an index.

## 4.1 Overall trends

The OECD observes large differences in the overall level of restrictiveness, both between sectors and between countries. Consequently, they argue, there are gains both from reducing the overall level of restrictiveness and from making regulation more uniform. In an increasingly interconnected global economy, current services restrictions make the protected sector less productive. This has knock-on

consequences for downstream firms and, not the least, for trade in goods, for which services are crucial (OECD, 2014).

In an overall assessment based on the World Bank STRI, Borchert, Gootiz and Mattoo (2014) argue that, while public monopolies are now rare and few services markets are completely closed, numerous “second-generation” restrictions on entry, ownership, and operations persist. Even when there is little explicit discrimination, market access is often unpredictable because the allocation of new licenses remains opaque and highly discretionary in many countries.

## 4.2 Development over time

In the future, the OECD STRI will allow us to track barriers to trade in services over time. Until more time has passed since its launch in 2014, it can only provide a static picture, however.

Roy (2015) uses WTO data from the WTO’s Integrated Trade Intelligence Portal (I-TIP) to track the development of trade barriers affecting services since 2000.<sup>19</sup> Between 2000 and 2014, 77 percent of all measures recorded were liberalizing in nature while 23 percent increased protection. The share of protectionist measures has risen somewhat since 2000, but remains below 50 percent in recent years.

The proportion of trade-liberalizing measures was about the same for developed and developing countries during the period. For China, a country that figures prominently in the dataset, the proportion of trade-liberalizing measures was above 90 percent.

Among the different modes of service supply, mode 1 (cross-border supply) is associated with the highest share of trade-restrictive measures. About half of the recorded mode 1 measures since 2000 were trade-restrictive. Typical trade restrictive-measures in the mode 1 category are commercial presence requirements, limits on credit card purchases and prohibitions on cross-border insurance.

Conversely, mode 4 (cross-border movement of persons) has had the highest proportion of liberalizing measures since 2000 – almost 80 percent. Trade-liberalizing measures in this category include expanded categories of natural persons eligible for temporary stay and extended periods of stay, and the relaxation of procedural requirements in connection with the cross-border movement of persons. As explained in section 6, however, the total number of measures used for this analysis is fewer than 50 and other sources tell a somewhat different story.





In absolute terms, Mode 3 (commercial presence often in the form of FDI) is responsible for the highest number of both liberalizing and trade-restrictive measures. As with mode 4, however, the share of liberalizing measures approaches 80 percent.

Roy (2015) concludes that there has been “a significant push toward greater liberalization” of trade in services since 2000, a development that has been primarily unilateral. He attributes this trend to a growing understanding of the economic benefits associated with reducing barriers to trade in services. The trend could be explained, at least in part, by demands from downward users of services as inputs. As a consequence, Roy argues, the “greater role of global supply chains, and the essential role of various services in their proper functioning, may have induced a different political economy dynamic than what had traditionally prevailed for trade in goods” (Roy, 2015).

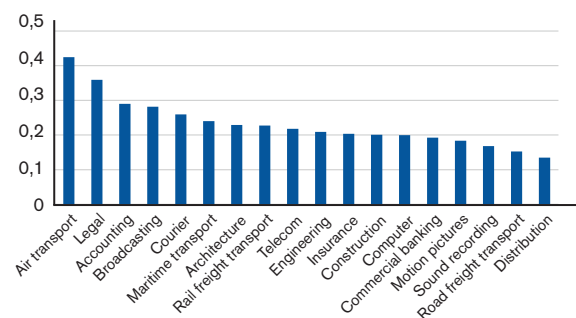
If Roy’s arguments are correct, it means that liberalization of trade in services does not rely on negotiations to the same extent as trade in goods, at least for modes 3 and 4. This conclusion corresponds with a previous analysis by the Board that found that the political economy dynamics are different for market access negotiations compared with behind-the-border negotiations (Kommerskollegium, 2015c). It also means that protectionist instincts appear to be weaker for trade in services, at least for now. At the same time, a non-negligible number of trade-restrictive measures have been introduced in recent years and net liberalization appears to have been concentrated to services supplied through modes 3 and 4. As a result there is no reason to be complacent about current trends with respect to barriers to trade in services.

### 4.3 Sectoral observations

According to the OECD STRI, air transport services stand out as the most protected sector, followed by several professional services, other transport services and communications services (figure 40).

**Figure 40: OECD STRI per sector (2015)**

Index between 0 and 1. Simple average across countries



Source: OECD

According to the OECD, foreign equity limitations are the most common in infrastructure sectors. Behind-the-border regulations related to licensing make up substantial barriers to trade in professional services. In construction sectors, access to the public procurement markets is particularly important. National treatment with respect to taxes and subsidies is important in all sectors, but especially in transport and audio-visual services sectors. Finally, restrictions on the movement of natural persons significantly hinder trade, particularly in skilled-labour-intensive sectors such as computer services and professional services (OECD, 2014).

Based on results from the World Bank STRI, Borchert, Gootiiz and Mattoo (2014) also conclude that the highest barriers are observed in professional services, such as accounting, auditing and legal services. These services sectors typically require international movement of persons. Consequently, they face two major barriers: (1) immigration-related restrictions and (2) licensing and qualification-related restrictions.

Secondly, transport services remain restricted in high-income countries and are subject to relatively high barriers in developing countries.

Telecommunications services are relatively free of discriminatory restrictions. Globally, only 10 percent of the countries examined were either closed or virtually closed to foreign firms. At the same time, only 40 percent are fully open to the establishment of foreign service providers. In addition, governments often limit the number of providers or foreign ownership.

In financial services, the historic dominance by “national champions” has given way to increased openness. In both banking and insurance, however, the allocation of new licenses often remains opaque and discretionary.

Finally, according to Borchert, Gootiiz and Mattoo (2014), retail services rank among the most open sectors globally. Even in the retail sector, however, a range of regulations, such as zoning laws, can prevent entry in both developing and developed countries.

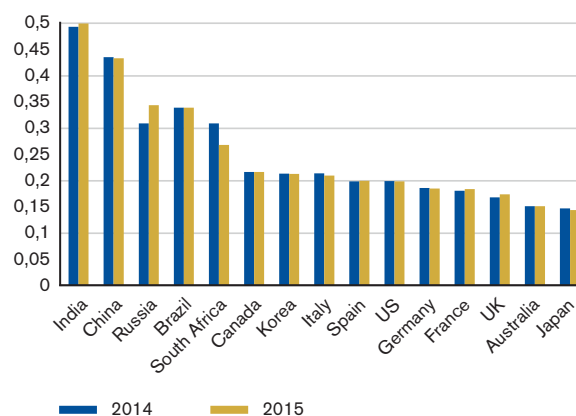
#### 4.4 Cross-country observations

According to the 2015 average OECD STRI figures, the BRICS economies maintain considerably higher levels of restrictions on trade in services than most OECD economies. Countries such as Japan, Australia, the UK and France can be found at the other end of the spectrum (figure 41).

In terms of cross-country differences, the World Bank STRI (figure 42) reports that the UK, Spain and Germany are some of the most open economies in the world with respect to services. Again, BRICS economies, particularly India, score poorly. Apart from the BRICS countries, Borchert, Gootiiz and Mattoo (2014) identify a number of countries in Asia and the Middle East that have particularly restrictive policies, including Indonesia, Malaysia, the Philippines, Thailand, Egypt, Iran and Saudi

**Figure 41: The OECD Services Trade Restrictiveness Index**

Index between 0 and 1. Simple average across sectors

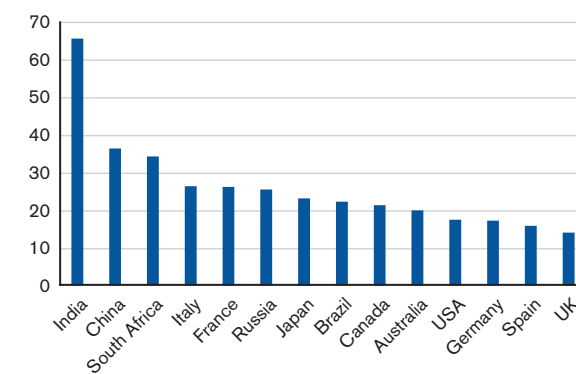


Source: OECD

Arabia. The same applies to African countries such as Ethiopia, Zimbabwe and the Democratic Republic of Congo. By contrast, the World Bank reports that most OECD countries as well as a group of least developed countries, including Rwanda, Madagascar, Senegal, and Mongolia are relatively open.

**Figure 42: The World Bank services trade restrictiveness index**

Index between 0 and 100. Simple average across sectors. Years 2008-2010



Source: World Bank

#### 4.5 Trade effects

According to the first preliminary analysis by the OECD (Nordås and Rouzet, 2015), trade restrictions on services, as measured by the STRI, have a negative effect on both imports and exports of services (figure 43).

“[We] find that more restrictive countries clearly import less services. The finding survives all robustness checks. Interestingly, we also find that more restrictive countries export less services. Again the finding passes all robustness checks.” (Nordås and Rouzet, 2015, p. 4)

The calculations by Nordås and Rouzet indicate that a reduction by 5 points (from a sector STRI score of 0.3 to 0.25, for example) is associated with an increase of a country’s imports of banking services by 5 percent and its exports by 9 percent. According to the report, a five point reduction in the STRI corresponds to removing “a few regulations”.

The negative effect of services trade restrictions on imports is intuitively what one would expect. More surprising is the result that restrictions on the entry or operation of services also appear to affect exports negatively. In fact, the OECD calculates that “the detrimental impact of services trade restrictions on services exports is about twice as large as for imports.”

The fact that a statistically significant effect is found for services exports indicates that services trade liberalisation has a pro-competitive effects in service sectors. The preliminary results by Nordås and Rouzet do not reveal whether the export-stimulating effect operates through the entry of more efficient foreign-owned affiliates or through learning and innovation by domestic firms when exposed to competition.

Preliminary analysis by the OECD also indicates negative effects of service barriers on *exports of manufactured goods*. Higher barriers to trade in services are associated with lower exports of manu-

factured goods for most of the analysed sectors (Nordås and Rouzet, 2015).

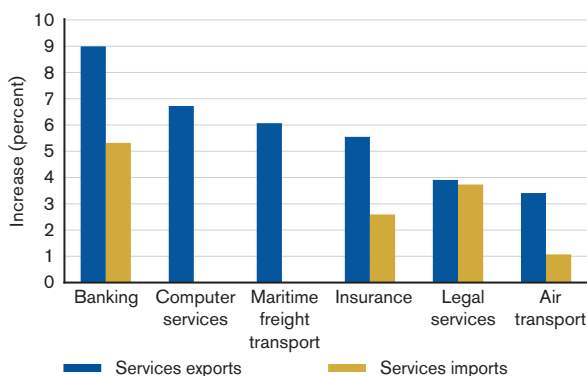
Similar results are reported by Arnold, Javorcik and Mattoo (2011) in a study on the Czech Republic and by Arnold, Javorcik, Lipscomb and Mattoo (2016) in a study on India. Both these studies identify a positive relationship between services sector reform and the performance of domestic firms in downstream manufacturing sectors. Arnold, Javorcik and Mattoo (2011) conclude that “allowing foreign entry into services industries appears to be the key channel through which services liberalization contributes to improved performance of manufacturing sectors”

According to Bertho, Borchert and Mattoo (2016), moreover, policy restrictions in the maritime service sector increase maritime transport costs by 26–68 percent. The authors calculate that this reduces seaborne trade flows between 48 and 77 percent depending on the level of restrictiveness. Since the bulk of international trade in merchandise goods is seaborne, restrictions on maritime transport services thus have a substantial overall negative impact on trade in goods.

Finally, according to Borchert, Gootiiz and Mattoo (2014), restrictions on foreign acquisitions, discrimination in licensing, and restrictions on repatriation of earnings and inadequate legal recourse all have a significant negative effect on investment in services sectors.

**Figure 43: Trade effects of reducing the OECD STRI**

Estimated change in services trade from a five basis point reduction of STRI.\*



Source: Nordås and Rouzet (2015)

\*Results for imports of maritime transport services and computer services were not statistically significant.

## Example

### Maritime services – the US Jones Act.

A particularly blatant protectionist piece of legislation is the US Jones Act from 1920, named after its sponsor, Senator Wesley Jones from the State of Washington. It requires all merchandise goods transported by water between US ports to be carried on US ships, constructed in the United States, owned by US citizens and crewed by US citizens or US permanent residents. Through this legislation, Senator Jones successfully made Alaska dependent on Seattle-based shipping. The Jones Act is also a form of public support for the US shipbuilding industry since it requires all domestic maritime transports to take place on US-built ships. Since its enactment, many attempts have been made to repeal it.

## 5. Investment Flows

Global flows of foreign direct investment (FDI) increased between 1996 and 2007 with peaks occurring in 2000 and 2007. Since the GFC, however, global FDI has decreased, with a particularly sharp decline between 2013 and 2014 when global FDI flows fell by 16 percent to \$1.23 trillion (UNCTAD, 2015). During the same period, FDI flows to developing countries increased, however, reaching 55 percent of global FDI inflows in 2014. In other words, the drop in FDI inflows since the GFC has mostly affected developed economies.

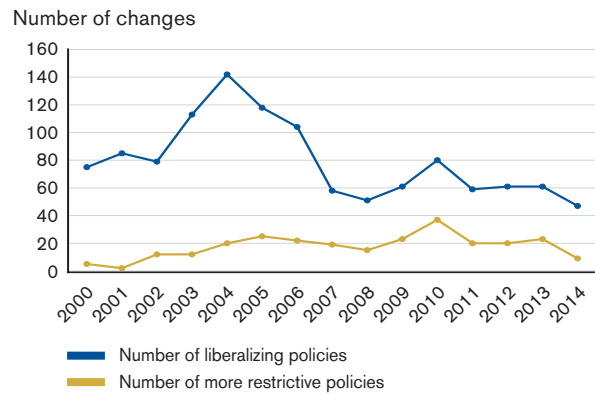
The service sector accounts for a large and growing share of global FDI. In 2012, services accounted for 63 per cent of the global FDI stock (UNCTAD, 2015).

### 5.1 Development over time

According to the latest joint OECD-UNCTAD report on G20 investment measures, the long term trend since the GFC is enhanced openness for foreign direct investment. Since the beginning of the crisis, well over 80 percent of public measures related to FDI have been liberalizing in nature.

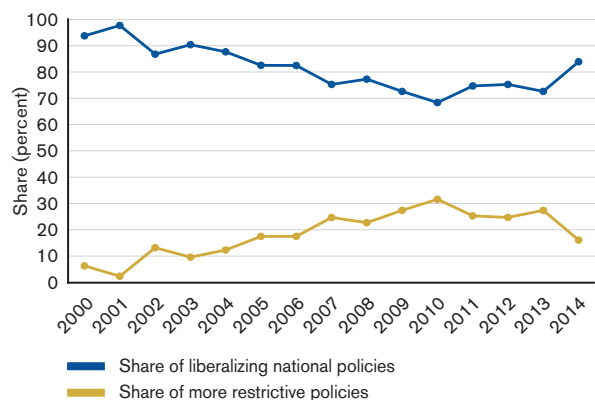
UNCTAD's World Investment Report (2015) paints a similar picture (figure 44). For each year since the year 2000, liberalizing policies have outnumbered more restrictive investment policies globally. While the share of new liberalizing policies decreased during the first decade of the 21st century, that trend now appears to have reversed again toward more liberalization (figure 45).

**Figure 44: Changes in national investment policies**



Source: UNCTAD 2015

**Figure 45: Liberalizing vs. more restrictive investment policy changes**



Source: UNCTAD 2015

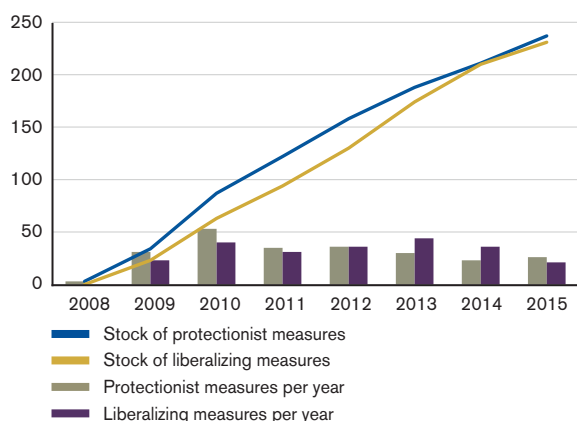




GTA statistics on investment measures do not fully support this picture (figure 46). The GTA reports approximately the same number of discriminatory measures as UNCTAD, but the number of liberalizing measures is markedly lower during the same reporting period (2009-2015).

**Figure 46: Investment measures**

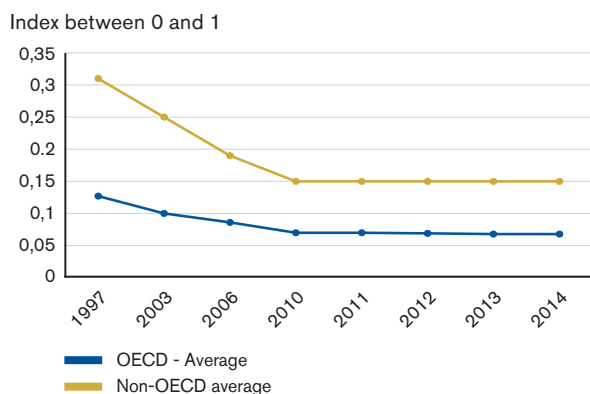
Number of measures introduced since 2008 and still in force



Source: GTA

The OECD's FDI regulatory restrictiveness index (FDI Index) supports the conclusion that FDI restrictiveness fell among OECD members as well as non-members between 1997 and 2010 (figure 47). After 2010, however, the level of FDI regulatory restrictiveness appears to have levelled out in both OECD member states and non-member states. The FDI Index measures statutory restrictions on foreign direct investment in 58 countries – all 34 OECD member states and 24 non-member states, including all G20 states.

**Figure 47: The OECD FDI restrictiveness index**



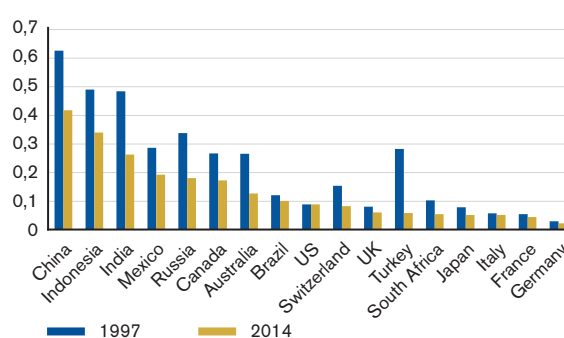
Source: OECD

## 5.2 Cross country observations

When we use the FDI index to look at individual countries, the same general picture emerges. There are falling levels of FDI restrictions in all countries and, consequently, all country groups (figures 48 and 49). At the same time, the level of FDI restrictiveness remains higher in non-OECD and, in particular, BRICS countries.

**Figure 48: FDI restrictiveness index**

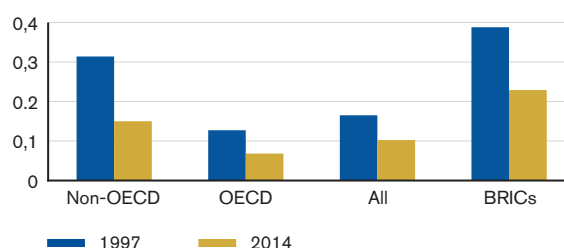
Index between 0 and 1



Source: OECD

**Figure 49: FDI restrictiveness index**

Index between 0 and 1



Source: OECD

A further indication of a policy environment where the objective is to attract rather than restrict FDI is the fact that a growing number of international investment agreements include pre-establishment commitments, i.e. commitments to give foreign investors treatment equal to that of domestic investors, not only after establishment but also when they enter the market (UNCTAD, 2015).

As discussed previously in the report, however, the use of domestic content requirements appears to be on the rise. While domestic content requirements are not categorized as investment measures in the surveyed databases, they are likely to deter foreign investment. Consequently, the increasing use of these types of measures should be taken into account in an overall assessment of the direction of investment policies.

## 6. Movement of Persons

Major restrictions remain worldwide with respect to the movement of persons. It is by far the most heavily regulated type of trade flow in today's global economy.<sup>20</sup> Restrictions appear, for example, in the form of quotas, labour market tests, limitations on stay, nationality requirements, residency requirements, discriminatory licensing requirements and lack of recognition of professional qualifications.<sup>21</sup>

At the same time, the gains that accrue from reducing barriers to migration are vast. According to Clemens (2011, p. 84):

*“The gains from eliminating migration barriers dwarf – by an order of magnitude or two – the gains from eliminating other types of barriers. For the elimination of trade policy barriers and capital flow barriers, the estimated gains amount to less than a few percent of world GDP. For labor mobility barriers, the estimated gains are often in the range of 50–150 percent of world GDP.”*

While these numbers refer to less than realistic scenarios that involve full liberalization, estimations of welfare gains from reducing barriers to migration are consistently higher than the corresponding estimates with respect to reductions in barriers to goods, services or investment (Clemens, 2011; Ortega and Peri, 2014; Docquier et.al., 2015).

What are the mechanisms that may explain these results? On a fundamental level the answer is an intuitive one, since labour is a production factor that directly affects GDP in standard growth models. By contrast, trade in goods is a consequence of domestic production. Beyond this observation, however, recent academic research identifies several growth-stimulating channels through which migration affects growth. Ortega and Peri (2014), for instance, find “evidence of a robust, positive effect of openness to immigration on long-run income per capita.” This effect operates through an increase in total factor productivity, which in turn is realized through an increase in the range of skills and ideas in the host country. In other words, it appears that one effect comes from a more efficient division of labour within the economy that reduces bottlenecks and improves productivity.

### 6.1 Development over time

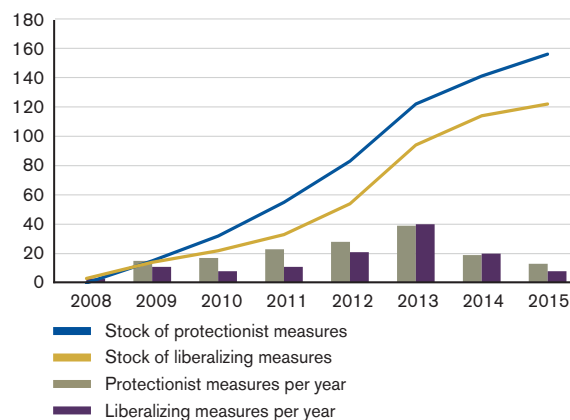
While high barriers to migration remain globally, it is not evident that they have increased further in

recent years. In fact, evidence from the WTO's I-TIP services database suggests that barriers to migration have been reduced since 2000. According to Roy (2015), almost 80 percent of GATS mode 4 measures (cross-border movement of persons) recorded in the database since 2000, are liberalizing in nature, whereas 20 percent are trade-restrictive. Developed countries show a greater propensity than developing countries to liberalise mode 4. The number of mode 4 measures recorded in I-TIP since 2000 is fewer than 50 in total, however. Consequently, these results should be interpreted with some caution.

The GTA records a higher total number of measures since 2009 than the I-TIP records since 2000. According to the GTA, however, the number of protectionist migration measures has been somewhat higher than the number of liberalizing measures since 2008 (figure 50).

**Figure 50: Migration measures**

Number of protectionist and liberalizing measures introduced since 2008



Source: GTA

These two sources may appear to tell diverging stories, but they could both be true. The general trend since 2000 could be one of liberalization, especially on the part of developed countries. Since 2008, however, the number of protectionist measures could also be on the rise. Policy changes may furthermore go in both directions at the same time, for example by reducing the scope of persons eligible for work permits (protectionism), but improving the rights and procedures for those who are eligible (liberalization). There can also be a large discrepancy in terms of restrictiveness between formal rules and their application. While Sweden abolished labour market tests in 2008, the current wait-



ing period to get a work permit is 5–14 months, according to the Swedish Migration Agency. New Zealand, on the other hand, still applies labour market tests but has a much shorter waiting period (one to five weeks) for processing work permits. In reality therefore, it could be argued that New Zealand’s regime is less restrictive. Ultimately, available evidence is too sparse to make certain determinations about the direction of recent trends.

### 6.2 Cross-country observations

If we look at restrictions on the movement of persons across countries there are also substantial differences. According to OECD STRI figures for the movement of persons, countries such as Russia are particularly restrictive, whereas the US, Canada, and Japan are more open (figure 51). Between 2015

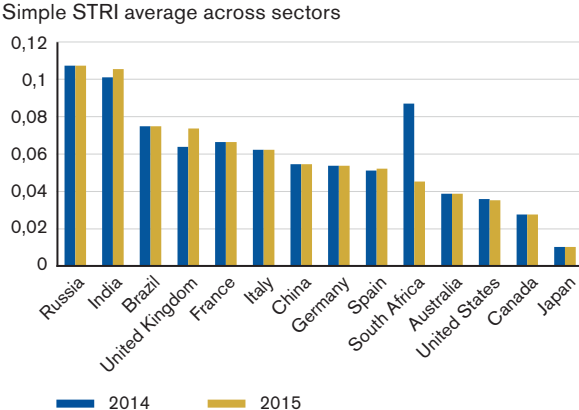
and 2014, more countries increased restrictions on the movement of persons than reduced them. South Africa and the US reduced restrictions between 2014 and 2015, while India, the UK, Spain, the Netherlands, Denmark, Ireland and Iceland all introduced more restrictive regimes (the last four countries are not shown in figure 51).

### 6.3 Effects on trade in goods and services

Restrictions on the movement of persons impact trade in goods and services negatively. In their summary of the current state of research on the connection between immigration and trade, Ottaviano, Peri and Wright (2015) write that “immigrants seem to generate a substantial amount of trade on average.”

According to the Board’s own estimates, based on firm-level data, the hiring of one additional migrant from a certain country is associated with a six per cent average increase of the hiring firm’s export of services and a four per cent average increase in its export of goods, to that country (Kommerskollegium, 2015d). We argue that there are several channels that potentially explain this effect. Cross-border workers may assist firms in overcoming lack of market-specific information and networks. They may also contribute to productivity and sales by contributing additional know-how. Finally, the cross-border movement of persons may facilitate transfer of technology and be conducive to organizational learning and the integration of international operations.

**Figure 51: Restrictions on the movement of persons**



## Example

### Migration measures – EU regulation for intra-corporate transferees

Restrictions on the movement of labour migrants and service suppliers are often implemented through a work permit policy. Typically, a number of conditions must be met to gain a permit. The restrictiveness of these conditions determines the level of openness.

In 2014, the EU adopted a directive on the conditions of entry and residence of third-country nationals in the context of intra-corporate transferees (ICTs). ICTs are eligible for a permit if they can present a work contract with the multinational company's entity in the EU, if they have worked at least 3 up to 12 uninterrupted months for the company immediately preceding their transfer and if they have sufficient qualifications. Entry and work rights for family members are guaranteed. The permit is valid for a maximum of 3 years in the case of managers and specialists and 1 year for trainee employees. However, there are several other conditions and EU member states may impose limits to the number of ICTs that may be admitted to their territory (quotas).

This directive is typical of restrictions on the movement of persons. It combines liberalising with protectionist measures. A large number of conditions, sometimes with undefined key terms such as "sufficient qualifications", are attached. Conditions are more liberal towards higher than lower-skilled labour. In addition, liberalization is often undercut by "flanking policies" - in this case a national quota - in other cases non-transparent labour market tests.

Overall, high barriers to the movement of persons remain globally. While evidence is too sparse to make certain determinations as to trends over time, there is a risk that public perceptions of migration as a threat in the wake of the refugee crisis in the Middle East, could lead to an increase in

restrictions on the movement of persons. Since academic research indicates substantial economic benefits from cross-border movement of persons, it is important that the liberalization of labour migration and the temporary movement of persons be allowed to continue.







## 7. Data Flows

Movement of data is an essential feature of 21st century trade. Modern business models often depend on data being collected, stored, processed and transferred within firms, as well as to and from customers and business partners. Firms also rely on data transfer for efficiency gains and the management of internal operations (Kommerskollegium 2014, 2015b, Meltzer, 2014a).

McKinsey (2016) estimates a 45-fold increase in data flows between 2005 and 2014 and data flows enable a large part of service trade. In 2012, for instance, the U.S. exported over \$140 billion worth of digitally enabled services to the EU while the EU exported about \$86 billion worth to the US (Meltzer, 2014b).

In addition, McKinsey calculates that trade in goods, FDI flows, migration and data flows together raised world GDP by 10 percent between 2003 and 2013.<sup>22</sup> Out of McKinsey's four categories of economic "flows" (goods, FDI, migration and data flows) only cross-border trade in goods (3.5 percentage points) contributed more toward the 10 percent aggregate figure than data flows (3 percentage points). In a separate, value-added based calculation, McKinsey found that data flows contributed more to world GDP growth between 2003 and 2013 than trade in goods (McKinsey, 2016).

In view of this, it is clear that restrictions on data flows can be disruptive to production, trade, and business models. Data barriers generate direct costs, such as compliance costs, extra labour costs and costs associated with separating data. Indirect costs arise when companies are prevented from

accessing global cloud or other digital services, or from using outsourcing solutions. Firms may have to resort to less effective and more expensive local suppliers, affecting productivity, quality and price. In addition, companies might have to move certain functions to the country imposing barriers. Economic costs are often related to the fact that companies cannot utilise economies of scale when data cannot be processed abroad. This will reduce the use and efficiency of data flows and the ability to take advantage of 'big data' processing.

### 7.1 Data restrictions and protectionism

Any discussion of restrictions on cross-border data flows goes to the heart of the question discussed in section 2.2: What is protectionism? According to two recent rulings by the European Court of Justice (ECJ), restrictions on data transfers are often introduced in order to protect fundamental human rights, such as the right to privacy.<sup>23</sup> In other words, the regulation of data transfers cannot be regarded as protectionist per se. While data regulation can impede trade and discriminate against foreign firms, restrictions on data transfers often reflect the fundamental values of countries. Decisions to impose restrictions on data flows therefore often entail a balance between the requirements of the digital economy and the protection of other legitimate values (Kuner, 2015).

Data regulation resembles other NTBs, such as TBT and SPS measures, in the sense that they are prudential measures where the challenge is to avoid unnecessary trade distortions. As for TBT and SPS measures, therefore, an important consideration has to do with whether there are less trade distorting ways to ensure that the same policy objectives are met. For example, basic regulatory objectives could be addressed either through a risk-based approach or a location-based approach (USITC, 2013).

### 7.2 The rise of data barriers

As the world becomes increasingly digitized, more and more restrictions are put in place. Generally there are four reasons why countries introduce restrictions on data flows:

1. protection of privacy, consumer protection and the protection of data
2. national security objectives,
3. as part of industrial policy and economic development, and
4. for protectionist purposes (though this is rarely the official objective)

Restrictions on cross-border data movement and data localization requirements are the two most common types of data barriers discussed in the

trade literature. There are a range of other rules and restrictions that affect data flows that might have trade-restrictive effects, however.

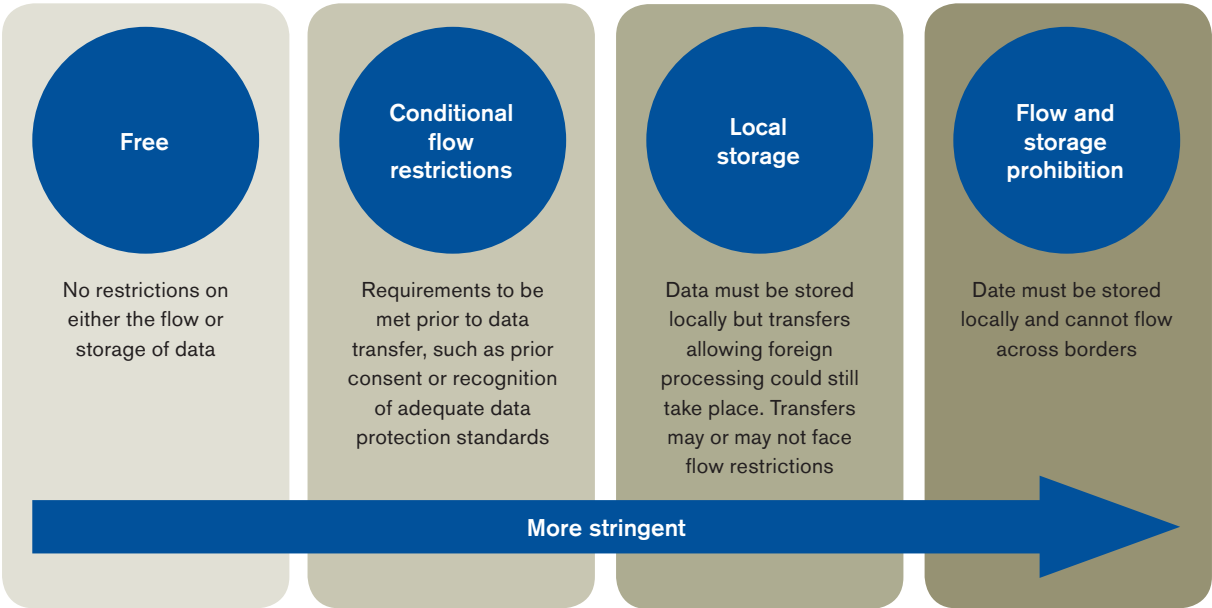
Restrictions on cross-border data movement and local storage requirements sometimes overlap, leading to a complete ban on cross-border data transfers. In other instances, cross-border data movement is allowed when certain requirements are met. Local storage requirements force a company to store data on servers located in the country where the data is produced. Sometimes this equals a prohibition of moving data out of the country. In other cases, only copies of the data must be stored locally.

The OECD (2015c) classifies data flow and storage restriction along a continuum, ranging from free to a complete prohibition (see figure 52).

While there is no exhaustive list of barriers to data transfers, the OECD (2015c and forthcoming) contains the most comprehensive such list to date. Even the OECD’s compilation only covers a subset of all potential data transfer restrictions that are in place, however.

As shown in figure 53, the number of data regulations has surged since 2007. Overall, there is also a trend towards the use of more restrictive measures. Since 2007, the world has also witnessed a broader variety of data regulations, including restrictions on what kinds of data that can be

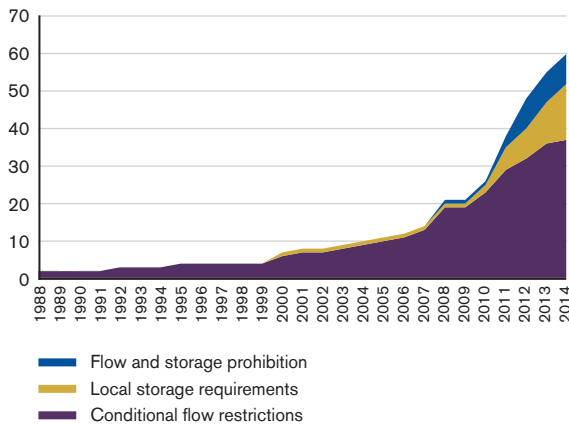
**Figure 52 Continuum of measures restricting data**



Source: OECD (2015c)

**Figure 53: Restrictions on data flows**

Number of implemented measures\*



Source: OECD (2015c)

\*Measures included in the database are pieces of legislation, regulation or policies that have been implemented by governments and are currently in force.

moved to another country and more data localisation requirements that prohibit data from being moved altogether.

What conclusions can be drawn from available analysis of barriers to data? To begin with, it is evident that more and more countries impose data regulation. In 2013, 101 countries had introduced data protection regulation. A large share of these include restrictions on cross-border data movement. (Greenleaf, 2014)

Secondly, the OECD only records a limited number of restrictions on the movement of non-personal data. There are a number of limitations on these kind of data flows, particularly in the field of financial services and accounting.

A majority of current data restrictions focus on personal data (i.e. data that can be linked to an individual). While it could be argued that personal data regulation only covers a limited, well-defined set of data, the reality is much more complicated. First of all, the scope of what is regarded as personal data is constantly shifting. More and more data is today classified as personal. It is also hard for firms to separate data and divide it into personal and non-personal datasets. As a result, restrictions on data transfers have a larger impact than commonly realized.

The analysis by the OECD and others underline a clear trend: more restrictions are put in place and they are of greater variety. As a consequence, they are likely to have an increasingly negative impact

on trade. While the considerations mentioned at the beginning of this section make us reluctant to label it a protectionist trend, there are signs that advantages to the domestic industry is often regarded as a value-added if not the main purpose (Hon et al, 2015).

## 7.3 Trade effects

So far, few studies have attempted to estimate the trade and welfare effects of restrictions on data flows. ECIPE (2013) uses CGE modelling to evaluate the EU's proposed General Data Privacy Regulation. They find negative effects on both GDP (ranging from -0,8 percent to -1,3 percent) and trade (services exports to the US drop by 7 percent).

Similarly, Bauer et al. (2014) use CGE modelling to evaluate data regulation, including data localization requirements, in seven economies: the EU, China, India, Brazil, Indonesia, Korea and Vietnam. The impact of recently introduced data regulation is estimated to have a negative impact on GDP in all seven economies. The impact on investment is also negative.

In addition to these early studies, the OECD is currently engaged in a project that attempts to quantify the effects of data restrictions on trade and welfare.

### Example

#### Data restrictions – smart objects turned back at the border

How do restrictions on data movement translate into trade barriers and give advantages to domestic firms? Chander (2015) gives an example that relates to personal fitness trackers sold in Australia - one tracker from a US company and another from an Australian firm. According to Australian law, health data that concerns Australian nationals must be stored in Australia. This would mean that the data that the American fitness tracker records cannot be sent for analysis and processed in the U.S. Hence, the U.S. tracker cannot offer the intended services. Alternatively, the US firm must use local servers and analysis. Meanwhile, the Australian competitor does not encounter this problem and can continue to operate as intended.

## 8. Conclusions

In this report, the Board takes a broad view of protectionism that refers to all types of 21<sup>st</sup> century trade flows, including trade in goods, services, investment, the movement of persons and data flows.

### Approaches to protectionism

The approaches to protectionism vary widely between international institutions and independent analysts. There is no consensus on what defines the term. Crucially, however, all surveyed institutions highlight two core elements of protectionism: (1) discrimination of foreign economic operators, and (2) trade-restrictiveness. Another dimension that often complements these two aspects is the extent to which public measures distort markets.

The Board views a discrimination approach as the most appropriate to frame issues related to protectionism. It combines normative legitimacy (non-discrimination is a central WTO legal principle) with practical application (it does not require advanced quantitative analysis). In addition, there is a clear element of implied intent whenever foreign economic operators receive a less favourable treatment than domestic commercial interests. Non-discrimination requirements also do not infringe on countries' sovereignty or "policy space", since they only insist that laws and regulations be applied equally to foreign and domestic economic operators.

### Trends in 21<sup>st</sup> century protectionism

There are worrying indications that protectionism is on the rise again. While trends with respect to agricultural support in many OECD economies, FDI and services supplied through local establishment appear to be moving in a positive direction, tariff liberalization is running out of steam and several types of NTBs have experienced a rapid increase in recent years. New restrictions on data flows and the risk of a backlash against the movement of persons, add to a situation that is of growing concern.

After the 2008 global financial crisis, the G20 vowed to "refrain from raising new barriers to investment or to trade in goods or services". It is clear from our analysis that this standstill pledge has not been honoured and that governments currently introduce far more protectionist measures than they remove.

### Tariffs for trade in goods – levelling out

Tariffs – that were on a downward trajectory during the latter part of the 20<sup>th</sup> century – have levelled out in many major economies during the first part of the 21<sup>st</sup> century. One potential explanation for this trend is the fact that countries maintain tariffs in order to use them as bargaining chips in ongoing and future trade negotiations. Since many trade negotiations go on for a long time, the paradoxical consequence is that that 21<sup>st</sup> century trade negotiations might prevent rather than promote tariff liberalization. As economic research discussed in this report shows, there are strong productivity effects from reducing or eliminating tariffs on input goods. Consequently, there are few good arguments supporting "wait and hoard" policies that maintain tariffs as negotiating chips.

Another reason for the lack of results with respect to traditional market access barriers is the fact that many emerging economies resist own liberalization through multilateral trade negotiations. From a development perspective, the underlying argument remains weak. The liberalization of input goods opens up a channel for cheaper and better intermediate and capital goods that increase productivity. As a consequence, trade liberalization is more important from a growth perspective for developing countries than for developed countries. The reason is that rich countries typically already have access to inexpensive intermediate and capital goods, while the relative cost of this is higher in developing countries. This is something that is rarely recognized in the context of trade negotiations.

Multilaterally, the observation that tariff liberalization has run out of steam is unsurprising since the DDA has not been concluded. It is more unexpected that bilateral and regional trade negotiations also do not seem to have had any significant downward effect on tariffs for major economies, at least not compared to tariff rates applied on an MFN basis. Since we already know that the effect of trade negotiations on services and FDI is small in terms of new market access, this observation casts doubt on the effectiveness of trade negotiations more generally. At the same time, the value of trade negotiations lies not only in new market access but also in greater predictability when countries bind themselves to the mast. There are also a number of free trade agreements that are either under negotia-





tion or have recently been concluded, that are likely to produce trade liberalization in the future.

### **Increasing non-tariff barriers for trade in goods**

For many NTBs we observe an increase in protectionism in recent years. Countries appear to resort increasingly to discretionary and non-transparent measures because they are easier to get away with than traditional, transparent and well-regulated ones. Developments with respect to subsidies, domestic content requirements and public procurement are particularly worrisome from this perspective. They represent NTBs that affect a lot of trade, are subject to a high degree of discretion and for which discriminatory measures vastly outnumber liberalizing ones.

An important consideration related to the increase in NTBs has to do with the impact on governance and institutions. Historically, good governance considerations meant that quantitative restrictions, which require market access allocation through licences, were banned by the GATT. By contrast, tariffs declared in advance and published openly were allowed. This historical lesson with respect to prioritization among trade barriers appears to have been forgotten in recent years. In the future, therefore, particular priority should again be given to restricting discretionary and non-transparent NTBs.

### **Currency manipulation**

While competitive devaluation may be a politically contentious issue, it is difficult to apply for protectionist purposes. Its effectiveness can be questioned on several grounds, particularly for small open economies whose firms rely on international sup-

ply chains and supply markets through channels other than cross-border trade. At the same time, suspected currency manipulation has undoubtedly been a problem in US-China trade relations for some time.

### **Positive developments for FDI and services supplied through local establishment...**

Most countries consider it to be in their own interest to continue to liberalize FDI and services supplied through local establishment. At the same time, many restrictions on entry, ownership and operations remain. Market access can also be unpredictable as a result of discretionary policies, for instance with respect to the allocation of licenses.

### **...as well as for agricultural support among OECD members**

We identify a long-term positive development for agricultural support in many OECD countries. At the Nairobi ministerial conference in 2015, the WTO decided to phase out remaining export subsidies for agricultural products, a decision that further contributes to the positive trend. This experience shows that the international community can, through determined and sustained action, reduce protectionism even where it is the most entrenched from the outset. At the same time, agriculture remains by far the most protected sector in the global economy.

### **Movement of persons – risk of a backlash**

Continued high barriers to labour migration and the temporary movement of persons is a source of considerable concern. There is a risk that renewed public perceptions of migration as a threat, could reverse previous positive trends. As we have noted,

research indicates that the gains from cross-border movement of persons are substantial. In view of this, continued liberalization of labour migration and temporary movement of persons is essential. From a good governance perspective, it would be particularly welcome to improve transparency and predictability in the applied regimes - for example, by defining criteria for labour market tests.

### **Barriers to data flows threaten to fragment the digital economy**

Rising restrictions on the movement of data are a growing concern that threatens to fragment the global digital economy and raise the cost of goods and services that depend on data flows. More restrictions are put in place and they are of greater variety. As a consequence, they are likely to have an increasingly negative impact on trade. At the same time, the ICT revolution has made it easier to circumvent trade barriers by opening up new modes of supply or making alternative modes of supply less costly.

### **A global value chain perspective of protectionism**

While this report organizes 21<sup>st</sup> century trade barriers according to different flows in the global economy (goods, services, investment, movement of persons and data), firms rarely perceive their reality in such a compartmentalized fashion. Instead, different barriers interact both by accumulating costs for firms and by influencing decision about whether to supply a market through arm's length trade, local establishment or digital platforms.

These interaction effects are difficult to explore and fully comprehend. In recent years, however, a more realistic perception of business reality and the trade barriers that firms face has begun to emerge in the trade community.

### **Barriers to the flow of knowledge and technology**

The spread of knowledge and technology is potentially the most important force of economic development associated with international trade. Consequently, barriers to cross-border flows of knowledge and technology could prevent economic progress. Due to the absence of data and an established methodology to measure such barriers, this report does not cover barriers to the flow of knowledge and technology. For the future, however, this is undoubtedly an important aspect of any attempt to provide a comprehensive overview of global protectionism.

### **Trade effects**

Available quantitative analysis suggests that trade has been negatively affected by protectionist measures introduced since the GFC. So far, however, the slow-down in world trade has primarily been attributed to factors other than protectionism, notably falling energy prices, demand-driven cyclical factors and structural factors related to a retrenchment of international supply chains. An important next step would be to attempt to assess the trade impact of recent protectionism more systematically.

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# Notes

- 1 Articles 2.2 and 5.7 of the WTO Agreement on the application of sanitary and phytosanitary measures.
- 2 Trade and growth critics Dani Rodrik and Francisco Rodriguez conclude their seminal paper from 2001 with the following remarks: "We do not want to leave the reader with the impression that we think trade protection is good for economic growth. We know of no credible evidence - at least for the post-1945 period - that suggests that trade restrictions are systematically associated with higher growth rates... The effects of trade liberalization may be on balance beneficial on standard comparative-advantage grounds; the evidence provides no strong reason to dispute this. What we dispute is the view, increasingly common, that integration into the world economy is such a potent force for economic growth that it can effectively substitute for a development strategy."
- 3 According to Autor, Dorn and Hanson (2013), import competition explained 25 percent of the aggregate decline in US manufacturing employment between 1990 and 2007.
- 4 87 WTO members, a little less than 50 percent of the membership, contributed to this report.
- 5 The extraction date for all GTA statistics used in this report is 26 January 2016.
- 6 The GTA database contains three categories of trade measures coded red, amber and green. Measures referred to as "protectionist" in GTA reports are coded red or amber. Measures coded red almost certainly discriminate against foreign commercial interests and have been implemented. Measures coded amber have either (a) been implemented and may discriminate against foreign commercial interests, or (b) been announced and would, if implemented, almost certainly discriminate against foreign commercial interests. "Liberalizing measures" (coded green) are measures that (a) have been announced and involves liberalisation, (b) have been implemented and are found upon investigation not to be discriminatory, or (c) have been implemented, involve no further discrimination, and improves the transparency of a jurisdiction's trade-related policies.
- 7 As indicated in figure 4, non-export subsidies is the second largest and trade finance the fifth-largest category individually.
- 8 WTO (2007) reports average tariffs of 20-30 percent before the first round of GATT negotiations, correcting a previously widely quoted figure of 40 percent: "Although this [40 percent] estimate is frequently reported there is no study to the knowledge of the authors of this report which indicates the source and the method (country coverage, product coverage, type of tariff) of how this average rate was estimated"
- 9 At the same time, the average MFN applied rate calculated by WITS represents the average rate for traded goods, which means that tariff lines exposed to prohibitive tariffs are not included in the average rates reported here.
- 10 Paragraph 1 of article XI reads as follows: "No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party."
- 11 Some members that have acceded to the WTO after 1995 have made commitments for export taxes, however.
- 12 Almost all US DCRs reported for the US in figure 11 refer to government procurement.
- 13 Articles 2.2 and 3.1 of the Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement).
- 14 Article 7 of the SPS Agreement.
- 15 The OECD lacks PSE statistics for India.
- 16 See Hoekman (2015) for an overview of the debate.
- 17 For more information on the methodology and basic approach to "restrictiveness", see <http://www.oecd.org/tad/services-trade/methodology-services-trade-restrictiveness-index.htm>.
- 18 See Borchert, Gootiz and Mattoo (2012) for more information on the World Bank STRI.
- 19 At the end of 2014, the I-TIP services database contained 360 records of policy changes. The database organizes information from WTO sources (TPR reports, Trade Monitoring Reports, GATS notifications), as well as publicly available information from the World Bank, APEC and UNCTAD. It can be accessed here: <http://i-tip.wto.org/services/> Policy changes were defined as measures that affect access to markets and conditions of operation by foreign service suppliers.
- 20 While we do not limit our analysis to restrictions that fall under GATS mode 4 (temporary movement of persons), we exclude migration in the form of refugee flows from the analysis. In other words, our scope is labour migration for the purpose of producing goods and services, whether short- or long-term, skilled or unskilled.
- 21 For a list of the type of restrictions on movement of persons recorded by the OECD STRI for different service sectors, see annex B in Miroudot and Pertel (2015).
- 22 Since services are closely correlated with FDI, the authors of the McKinsey study excluded trade in services from their econometric specification.
- 23 "Digital Right Ireland" (Joined cases ECJ C-293/12 and C-594/12) and "Maximillain Schrems v Data Protection Commissioner" (ECJ C-362/14)





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