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The Evolution of the Treatment of Agriculture in Preferential Trade Agreements

Clara Thompson-Lipponen,

Jared Greenville



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THE EVOLUTION OF THE TREATMENT OF AGRICULTURE IN PREFERENTIAL TRADE AGREEMENTS

Clara Thompson-Lipponen and Jared Greenville (OECD)

Preferential trading agreements are becoming a more common feature of the global agro-food trading environment, a trend that has increased since the early 2000s. While they increasingly cover the majority of trade worldwide, there remains a question as to the extent to which their treatment of agriculture has changed over time, and whether the liberalising elements contained in these agreements are increasingly addressing distortions in world agro-food markets. This paper presents findings on the evolution of the treatment of agriculture within preferential trade agreements. Changes in various aspects of liberalisation achieved through these agreements have been explored, such as provisions related to market access, export competition and domestic support. The report finds that agriculture appears to be increasingly treated in a similar manner to other goods trade, with expansion in the scope of agreements extending to agriculture. Agreements are delivering reduced tariffs among members across the majority of agricultural commodities – however, heterogeneity of rules of origin between agreements is likely to be undermining these benefits. Reflecting multilateral rules, provisions related to Sanitary and Phytosanitary measures and Technical Barriers to Trade have become a standard feature of agreements. Overall, preferential trade agreements are strongly influenced by the multilateral framework.

Key words: Agricultural trade, Regional Trade Agreements

JEL codes: Q17, F60, F14

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Executive summary

Since the early 1990s, countries have increasingly looked to bilateral and regional trade agreements (hereafter termed "preferential trade agreements", or PTAs, to include all reciprocal preferential agreements, both bilateral and regional) to pursue trade deals with trading partners. Part of the push has been the slow progress of multilateral negotiations, but there has also been a desire to deepen economic and political integration among members. The number of agreements – and the number of countries participating in these – has grown relatively steadily over the course of the last two decades, reaching a total of 288 PTAs notified to the World Trade Organization (WTO) and still in force in October 2018. These agreements currently cover the entirety of the WTO membership. Yet this number understates the actual number of agreements in use today, with a number of non-notified agreements also in place.

This paper explores changes in the treatment of agriculture within bilateral and regional preferential trade agreements spanning the last 60 years. The study documents the inclusion of 20 provision areas across 54 agreements. In addition, analysis of tariff preferences is provided for 96 agreements, complemented by an exploration of preference margins for 291 agreements. The objective is to create a picture over time of whether countries have sought to expand, maintain or limit the scope of how trade agreements treat agriculture. The 54 agreements were selected with a view to gaining relatively consistent coverage over time, while maintaining coverage of a minimum number of agreements in each 10-year period of the sample. Within these constraints, broad representation of countries and regions covered by agreements was attempted.

The evidence collected suggests that PTAs have been a tool to deliver greater openness in agricultural markets on a number of fronts. Furthermore, the widening of the scope of the agreements explored appears to have "carried" the agriculture sector along, with agreements applying these broader provisions to relevant issues in the agriculture sector. Yet certain features of PTAs, such as heterogeneous rules of origin, may diminish the extent of liberalisation achieved (the same may also be true of safeguards, notwithstanding their role as a "safety valve" to facilitate liberalisation). Furthermore, the preferential nature of these agreements means that there is scope for trade diversion – that is, despite improvements in market access, this access is not necessarily provided to the most efficient global producers, with the result that distortions remain in agricultural markets.

These facets point to the continued importance of the multilateral framework and, despite gains seen in market access in particular, the benefits on offer from a more multilateral treatment of market access. The multilateral framework has had a significant influence on the type and coverage of provisions included within the bilateral and regional agreements analysed. Nevertheless, it is evident that there are limits to the capacity of PTAs to deliver greater disciplines in areas such as domestic support – largely due to an inability to alter support in a preferential fashion, and thus an unwillingness to make such multilateral concessions within a preferential framework.

In order to derive the greatest benefits from global trade in agriculture, progress at the multilateral level needs to continue. The range of issues explored within trade agreements, and the inroads made, however, will create an environment of greater international competition for agricultural sectors within member countries. This process has the potential to nudge countries towards freer agricultural markets, as increased competition makes

certain forms of protection less sustainable, thus reducing demand for trade protection. In so doing, it can help to capture the benefits that freer markets will deliver for consumers and producers alike.

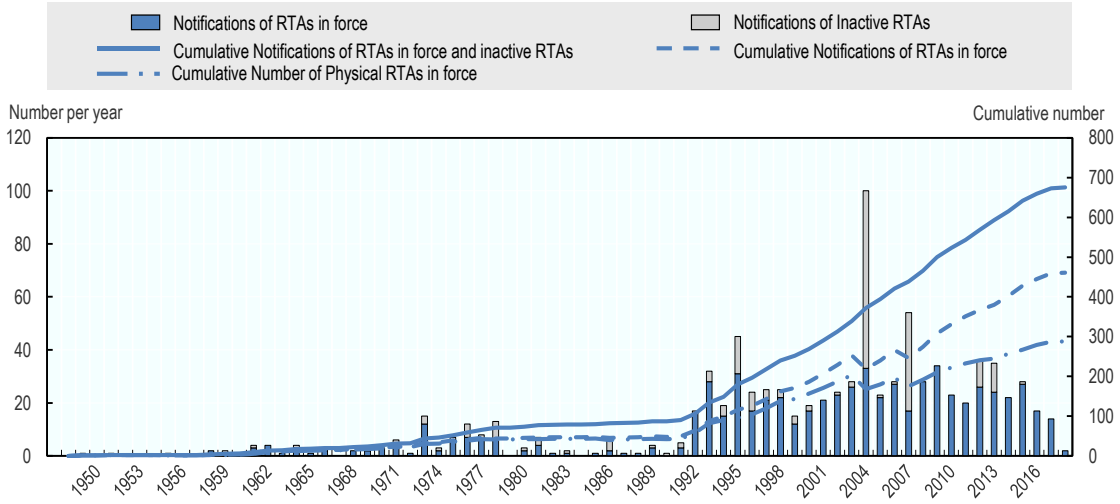
Key findings

- ***Agriculture appears to be increasingly treated in a similar manner to other goods trade.*** The number of agreements featuring exclusions for agriculture has not kept pace with the increase in the number of sampled agreements, and there are few instances of exclusion of agricultural products from the entirety of the agreements. There is also an increasing tendency to treat agriculture within the broader context of agreements rather than within a dedicated chapter.
- ***Preferential trade agreements appear to be strongly influenced by the multilateral framework***. Multilateral rules appear to have in many cases facilitated the inclusion of similar provisions within agreements. In other instances, a perceived lack of progress in the multilateral arena appears to have spurred countries to seek out alternative solutions amongst smaller numbers of parties.
- ***Agreements are delivering reduced tariffs among members across the majority of agricultural commodities.*** Agreements appear to have been delivering improvements in market access among the parties, with the tariff preference margin growing significantly over time. However, as preference margins remain limited to agreement members, the potential for trade diversion is high. These agreements therefore cannot capture the full benefits on offer from more universally-applied tariff reductions.
- ***Heterogeneity of rules of origin (RoO) between agreements is likely to be undermining the benefits of tariff reduction.*** There has been a lack of consistency in RoO applied to agriculture across the agreements, which has increased compliance costs associated with exporting to members of different PTAs. Given these costs, exporters may choose not to access preferences.
- ***Reflecting multilateral rules, provisions related to Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT) have become a standard feature of PTAs.*** The sampled trade agreements largely attempt to narrow differences between regulatory regimes as a means to capture the benefits created by these measures while at the same time reducing the trade costs involved in complying with them.
- ***The inclusion of trade remedies is increasing in line with trade liberalisation efforts***. The elimination of intra-regional tariffs appears to have been accompanied by increased provision for safeguards and anti-dumping measures, including for agriculture. These are a feature of the vast majority of sampled agreements, and increasingly so.
- ***Recent features related to investment, competition and intellectual property appear to extend to agriculture***. The move from a focus on market access to broader issues including the structure and functioning of markets is reflected in part through the rising inclusion of these provisions. Agriculture-related intellectual property provisions appear to have increased in recent years.

1. Introduction

Since the early 1990s, countries have increasingly looked to bilateral and regional trade agreements (hereafter termed "preferential trade agreements", or PTAs) as a means to increase trade and bring about closer integration with trading partners (Figure 1).[1] The number of PTAs – and the number of countries participating in these – has grown relatively steadily over the course of the last two decades, reaching a total of 288 agreements in force that had been notified to the World Trade Organisation (WTO) by October 2018 (WTO, 2018b).[2] These agreements currently cover the entirety of the WTO membership (WTO, 2018c). Yet this number understates the actual number of agreements in use today, with a number of non-notified agreements also in place among countries worldwide.

Figure 1. Evolution of regional trade agreements worldwide, 1948-2018



Note: Notifications of PTAs: goods, services and accessions to a PTA are counted separately. Physical PTAs: goods services and accessions to a PTA are counted together. The cumulative lines show the number of notifications/physical PTAs that were in force for a given year.
Source: WTO (2018e), October 2018.

Reflecting the shifting priorities of governments, the content and configuration of PTAs has changed, and the increased uptake of PTAs has been accompanied by a shift in the characteristics of the agreements themselves (Dür and Elsig, 2015; Hofmann, Osnago and Ruta, 2017). Questions remain as to whether the nature of the commitments made with

[1] The term "preferential trade agreements" used in this paper refers to all reciprocal preferential trade agreements, including bilateral trade agreements, regional free trade agreements (partial scope free trade agreements included) and customs unions. They do not refer to unilateral trade preferences (defined as "preferential arrangements" by the WTO) under which developed countries grant preferential tariffs to imports from developing countries (WTO, 2018a).

[2] 288 is the number of *actual* (termed "physical" by the WTO) PTAs in force, bilateral trade agreements included, notified to the WTO by October 2018. As the WTO counts two notifications for a PTA that includes both goods and services, this figure equates to 461 notifications to the WTO of PTAs that are still in force (WTO, 2018b).

respect to agriculture in particular have also changed or evolved over time. Such changes are important for understanding how the shift towards PTAs is affecting trade liberalisation for the sector, and whether such agreements are becoming an increasingly important means of removing distortions to world agricultural markets. These findings also have implications for multilateral liberalisation in terms of the extent of liberalisation already achieved and areas where multilateralising these gains may be relatively more achievable.

This paper seeks to explore the changes in the treatment of agriculture within preferential trade agreements over the last 60 years. It considers a range of provision areas, and looks within each sampled agreement to see whether various relevant provisions are included, creating a picture across time of whether countries have sought to expand, maintain or limit the scope of how trade agreements treat agriculture.

The study does not seek to explore the extent of enforcement of the given provisions – this will depend on the institutional settings and the administrative procedures and practices of the countries concerned. Instead, the focus is placed on the existence of provisions and an understanding of whether these provisions apply to (or exclude) the agricultural sector or certain agricultural products. In exploring whether these provisions apply, invariably some judgements need to be made around the text of the agreement. Thus, caveats apply at the margins. In addition, while the study explores a number of "WTO-beyond" provision areas, meaning provisions that fall outside the scope of the WTO, it does not explore changes in the depth of provisions, meaning the extent to which they go further than the requirements set out under WTO agreements (e.g. more stringent timelines) over time.

2. Approach and methodology

This study explores 20 provision areas (Table 1) for a sample of 54 agreements which entered into force between 1958 and 2017 (Annex B). In addition, analysis of tariff preferences is provided for 96 agreements, complemented by an exploration of preference margins for 291 agreements.

The 54 agreements coded were selected with a view to ensuring as much heterogeneity as possible with respect to both the contracting parties and date of entry into force (list in Annex B). One caveat should be borne in mind with respect to the sample. The significant variation that exists in total numbers of agreements entering into force across decades (ranging from four in the 1950s to 159 in the 2000-10 period) has meant that the distribution across decades within the relatively small sample of agreements studied is uneven (Table A B.2. in Annex B). As a result, the graphs presented in this paper cannot depict the share of all agreements with particular characteristics, but instead aim to broadly illustrate the extent to which trends in the inclusion of certain provision areas (and elements within these) have kept pace with the overall increase in agreements over the years.

A common methodology for classifying provisions is applied to the sample of agreements explored. The typology for agriculture-relevant provisions is set out in Annex A. This typology has been developed with a view to generating quantitative metrics, based on binary yes/no questions and counts, to facilitate the visualisation of information. It builds on others developed in existing studies by drawing key agriculture-relevant criteria from classifications used in broad non-agriculture-specific studies and databases such as DESTA (Dür, Baccini and Elsig, 2014), along with those that focus on specific trade provisions (see, for example, Crawford, McKeagg and Tolstova, 2013 and Viljoen, 2016 on safeguard measures).

The results of the application of this typology to the sample of 54 agreements are presented in Section 1.4. To put some of the findings in the context of findings by others, the following section provides background information for a select number of provision areas based on a literature review.

Table 1. Provisions included in the analysis

Provision Area	WTO/WTO-X
Tariffs	WTO
Rules of origin	WTO
Safeguard measures	WTO
Special and differential treatment (SDT/S&D)	WTO
Sanitary and phytosanitary measures (SPS)	WTO
Technical barriers to trade (TBT)	WTO
Direct/domestic support (to producers)	WTO
Export subsidies	WTO
Export taxes	WTO-X
Countervailing duties	WTO
State trading (import and export)	WTO
Export prohibitions and restrictions	WTO
Investment	WTO/WTO-X
Intellectual property (incl. geographical indications)	WTO/WTO-X
Co-operation on agricultural research and development (R&D) and training	WTO-X
Food security	WTO
Competition policy	WTO-X
Sustainable development and environmental protection	WTO-X
Animal welfare	WTO-X
Dispute settlement	WTO
Anti-dumping	WTO

Note: "WTO-X"= WTO-beyond, meaning provisions that fall outside the scope of the WTO.

3. Background: Findings in recent literature

Overview of recent trends in preferential trade agreements

According to the literature, the push towards "deeper" integration under PTAs, coined "new regionalism" in the 1990s (de Melo and Panagariya,1992, in Dür and Elsig, 2013), has been characterised by a shift in the nature of the agreements. While early agreements were mainly of the partial free trade agreement (or "partial scope") type, (even if the formation of customs unions was still not uncommon[3]), the majority of recent agreements are "full" free trade agreements that liberalise all or substantially all trade and address a much broader scope of issues. In parallel, the incidence of new customs unions has become relatively rare (Dür and Elsig, 2015).

[3] Customs unions are arrangements among countries under which the parties agree to allow free trade in goods within the customs union, and agree to a common external tariff (CET) with respect to imports from the rest of the world.

The geographic spread of members of PTAs has also continued to evolve as countries seek to form agreements with new partners. Over time, there has been a shift towards the greater involvement of Asian countries; in addition, there has been a move away from the traditional concept of "regional integration" among neighbouring countries – a key element of previous PTAs – in favour of cross-regional PTAs (Dür and Elsig, 2015; Teh, Prusa and Budetta, 2009).[4] Furthermore, looking ahead, the majority of agreements under negotiation are also bilateral (Fiorentino, Verdeja and Toqueboeuf, 2007; Dür and Elsig, 2015; WTO, 2018d). It could therefore be argued that the configuration of PTAs is increasingly becoming less "regional".

Another noteworthy trend has been an increase in PTAs between developed and developing countries, which have gradually replaced a number of non-reciprocal agreements. Developing countries are also increasingly making use of PTAs to govern trade among themselves. This trend is partly due to the emergence of several major PTA "hubs" in the developing world (Fiorentino et al., 2007; Teh et al., 2009).

Overall, the largest observed change in PTAs has been with respect to their content (Dür and Elsig, 2015). The scope or breadth of policy coverage of PTAs – termed by Hofmann et al. (2017) as "horizontal depth" – has increased over time, encompassing provisions that extend well beyond the traditional focus on tariff reductions, to address the range of issues affecting cross-border trade (Crawford, McKeagg and Tolstova, 2013; Hofmann et al., 2017).

The rise in global value chains (GVCs) in recent decades (Kowalski, Lopez Gonzalez, Ragoussis and Ugarte, 2015) has significantly contributed to this trend, generating greater need for inclusion within PTAs of provisions on investment, intellectual property and trade facilitation, amongst others (Taylor, 2016; Hofmann, et al., 2017). The average number of both border and behind-the-border related provisions has increased: while on average, five border-related provisions were included in PTAs signed before 2000, PTAs signed in the last five-year period include on average nine border-related provisions, while the average number of behind-the-border related provisions has reportedly increased from two to four (Hofmann et al., 2017).

Finally, the commitments made by PTA parties are also increasingly extending beyond those made at the multilateral level: legally-enforceable provisions outside the current scope of the WTO are included within over a third of PTAs (Hofmann et al., 2017) (Box 1). This has occurred for all countries, with a clear propagation of "WTO-plus" measures in PTAs between developed and developing countries as well as in PTAs among developing countries.[5] This suggests a growing receptivity and preparedness on the part of developing countries – at least middle-income economies – to agree to a deeper level of commitments (Lejárraga, 2014).

Treatment of agriculture within PTAs

Previous studies have also found evidence of change over time in the treatment of agriculture within PTAs. In the first instance, it is reported that agreements have increasingly included the agricultural sector – notwithstanding its political sensitivity. This

[4] In November 2013, 26 of 39 PTAs listed by the WTO under the label of "early announcement" extended beyond a continent (Dür and Elsig, 2015).

[5] "WTO-plus" refers to "deep" provisions – in other words, areas that fall *within* the current scope of the WTO but for which commitments are made that go beyond those at WTO level.

has meant that the reduction of trade barriers between members has been increasingly extended to agricultural products. Indeed, while the degree of inclusion and depth of liberalisation achieved has varied significantly across PTAs, it has been argued that the majority have resulted in greater, albeit still modest, liberalisation of market access in agricultural products (domestic subsidies excluded) than WTO-level agreements (Sanguinetti and Bianchi, 2002; Greenville, 2015). In this section, a brief review of provisions related to tariffs, SPS (sanitary and phytosanitary measures), TBT (technical barriers to trade), safeguards and export restrictions and taxes is presented.

Previous OECD analysis has found that, in terms of market access for agricultural products, the majority of trade agreements have included tariff cuts and other market access concessions that exceed those of individual countries' WTO commitments (Greenville, 2015). For example, of 53 PTAs analysed (signed between 1992 and 2009), over 90% of agricultural tariff lines (averaged over products and concessions) were scheduled to be duty-free when the agreements were fully implemented. Even in cases where tariff elimination did not cover all products, reductions were based on applied rates and not bound rates, indicating substantial progress towards tariff elimination. Agreements among developing countries were found to be making the greatest progress in eliminating tariffs (significantly increasing their share of duty-free tariff lines from 28% to 92%), compared with agreements between developed and developing countries (which increased their share of duty-free tariff lines from 68% to 87%). Of the geographic aggregates analysed (Asia-Pacific, Latin America and Inter-regional), Latin American countries increased their share of duty-free tariff lines the most (from 30% to 94%) at full implementation, while the share of the inter-regional group increased the least (from 68% to 86%) (Fulponi, Shearer and Almeida, 2011, in OECD, 2015).[6]

Nevertheless, in general, agriculture continues to receive special treatment in PTAs, and sensitive areas remain – the high percentage of tariff elimination belies in many cases numerous product exemptions within tariff headings, as well as the use of tariff rate quotas. Indeed, between 2001 and 2013, PTAs reportedly contributed very little to the reduction in global applied tariff protection for agricultural products (Bureau, 2017).[7] Estevadeordal, Shearer and Suominen (2009) likewise find that agricultural chapters in PTAs feature the least liberalisation with respect to tariffs, and the highest dispersion of liberalisation across agreements.

While tariffs continue to be important because of their trade-distorting consequences, they are not the only measures that have the potential to influence trade. Numerous other market access-related provisions, including rules related to SPS measures, TBTs and safeguards, are also important. Rules in these areas are becoming increasingly common features of PTAs, even if differences remain across agreements with respect to the details of provisions. Of the PTAs analysed by Baccini, Dür, Elsig and Milewicz (2011), 67% – mainly those between developed and developing countries – included SPS provisions.[8] The number of agreements with SPS provisions was found to have increased over time

[6] "Inter-regional" in this context means agreements between countries from different regions worldwide. For a full list of PTAs analysed, please see Fulponi, Shearer and Almeida (2011).

[7] PTAs were found to contribute only 0.5pp to the 6.5pp reduction in global applied tariff protection for agriculture over the 2001-13 period.

[8] 404 PTAs were analysed for this particular study, the results of which are systematically updated within the Design of Trade Agreements (DESTA) database (limited data publicly available).

(Baccini et al, 2011), with agreements entering into force in the 1990s and 2000s significantly more likely to contain such measures than those entering into force in the 1950s-1980s (WTO, 2017).[9] Agreements entering into force from 1995 onwards are reportedly significantly more likely to contain SPS provisions than those entering into force prior to this date, suggesting the transposition of the WTO SPS Agreement into subsequent PTAs. Nevertheless, these commitments may not necessarily be WTO-plus: few of the SPS chapters of the PTAs previously analysed by the OECD (Fulponi, Shearer and Almeida, 2011; OECD, 2015) were found to contain commitments beyond the core principles of the WTO-SPS agreement, although several (such as a number of agreements among Latin American countries and those concluded with New Zealand and Singapore) did include specific procedural commitments with respect to compliance with the core principles, such as transparency and equivalence, making these WTO-plus with respect to the WTO SPS Agreement.

Increasing numbers of PTAs also reportedly include norms for TBTs (Baccini et al., 2011).[10] Agreements entering into force from 1995 onwards are reportedly significantly more likely to contain TBT provisions than earlier PTAs, indicating – similar to trends in SPS provisions – the transposition of the WTO TBT Agreement into subsequent PTAs (WTO, 2017). Although studies (Fulponi, Shearer and Almeida, 2011; OECD, 2015) have found that these provisions do not go much beyond the general requirements of the WTO agreement, there are notable exceptions, including the agreements governing the European Union, which has adopted the principle of mutual recognition of both product standards and conformity assessments, and actively pursues harmonisation of product standards (Piermartini and Budetta, 2009). As with SPS measures, TBT measures are most likely to be included in agreements between developed and developing countries and are least likely to feature in agreements among developed countries (Baccini et al., 2011).

The rise in trade liberalisation can create new demands for use of trade remedies such as safeguard measures (Kruger, Denner and Cronje, 2009; Viljoen, 2016). Studies have found that the majority of agreements analysed contain specific conditions for the implementation of bilateral or regional safeguard measures, including general, specific (of which most are special agricultural safeguards), transitional and provisional safeguards, although the regulation of these again differs across agreements (Viljoen, 2016; Crawford, McKeagg and Tolstova, 2013).[11] Although little homogeneity was found even in the different agreements signed by a given country (Crawford et al., 2013), most of the provisions were found to relate to the type of measures which can be applied, the period of application, notification, compensation and dispute settlement (Viljoen, 2016). Provisions were also found to be similar to those under WTO law, with many of the agreements including the

[9] Of the 398 physical PTAs (both those still in force and those that have expired) notified to the WTO, listed within the WTO RTA-IS database as entering into force in and after 1990, 37% contain SPS provisions, whereas of the 81 (those in force and expired, and notified to the WTO) that entered into force prior to that date, only 1% contain SPS provisions (author calculations, based on WTO, 2017).

[10] 60% of the 404 PTAs analysed by Baccini et al. (2011) and 83% of the 70 PTAs analysed by Piermartini and Budetta (2009) were found to contain TBT provisions. No distinction was made in either of these studies between provisions relevant to agriculture and those that were not.

[11] For example, of the 26 PTAs analysed by Viljoen (2016), only three (the Australia- Chile FTA, the New Zealand-Hong Kong Closer Economic Partnership Agreement and the New Zealand-Chinese Taipei Economic Co-operation Agreement) did not make reference to a bilateral safeguard measure.

exact provisions of the WTO Agreement on Safeguards, while several others make direct reference to the procedure and obligations contained in WTO rules (Kruger, Denner and Cronje, 2009, in Viljoen, 2016). Lastly, in some cases, agreements – such as those aimed at deeper integration, the European Union being one example – were found to limit or prohibit the application of safeguard measures between members of the agreement (Lissel, 2015, in Viljoen, 2016; Teh, Prusa and Budetta, 2009).

Box 1. Overview of studies on PTA design

The design of PTAs has been explored within a number of recent studies. Horn, Mavroidis and Sapir (2010) present a typology of the coverage and legal enforceability of provisions in EU and US PTAs that either extend commitments already undertaken at multilateral level (termed "WTO+" in this instance) or that address issues lying outside the current scope of the WTO ("WTO-X"). Kohl, Brakman and Garretsen (2016) expand the dataset based on this methodology to include 296 trade agreements. Similarly, the World Bank has recently released a dataset on the WTO+ and WTO-X commitments of all PTAs in force and notified to the WTO (Hofmann et al., 2017).

The most comprehensive effort to map the design of PTAs across a wide range of areas is the Design of Trade Agreements (DESTA) database, covering more than 700 actual (physical) PTAs and roughly 100 indicators (Dür, Baccini and Elsig, 2014). The authors also introduce an additive index capturing the "depth" of a PTA based on the coverage of full tariff elimination, services trade, investment, standards, public procurement, competition and intellectual property rights. Other studies use a different approach, based on text-as-data analysis. Alschner, Seiermann and Skougarevskyi (2017), for example, use textual similarity to look at differences in design across 447 PTAs and thus to identify regional and inter-regional design clusters.

In addition, a number of studies have focused on coding specific provision areas across a smaller number of agreements. These areas include goods market access (Estevadeordal, Shearer and Suominen, 2009); trade remedies (Viljoen [2016], Crawford, McKeagg and Tolstova [2013] and Kruger, Denner and Cronje [2009] on safeguards and Teh, Prusa and Budetta [2009] on trade remedies more generally); TBTs (Piermartini and Budetta, 2009); intellectual property (Valdés and McCann, 2014; Elsig and Surbeck, 2016); and competition (Solano and Sennekamp, 2006). More recent studies include OECD analysis (World Bank, publication forthcoming) of SPS provisions across 283 agreements notified to the WTO and in force, as part of a broader World Bank study on regional trade agreements.

Finally, and more specifically, Fulponi, Shearer and Almeida (2011) explore the treatment of agriculture within a select number of PTAs with respect to certain areas (market access, subsidies, trade remedies, and requirements related to SPS and TBTs), based in part on previous work by Shearer, Almeida and Guttierez (2009). This work is synthesised within OECD (2015).

Source: OECD (2017b), OECD Secretariat.

The number of PTAs containing provisions on safeguards has also reportedly increased over time (Baccini et al., 2011), although this figure includes prohibitions on safeguards. They have also become more prescriptive in general (Crawford et al., 2013). In the past, bilateral or regional safeguard measures have mainly been found in agreements among developed countries, as well as in PTAs between developed and developing economies (mostly when the European Union or United States are a party to the agreement). Nevertheless, general bilateral or regional safeguards are reportedly increasingly being included in agreements among developing countries (Viljoen, 2016), even if much of the language used has been considered to be ambiguous (Kruger, Denner and Cronje, 2009). That is not to say, however, that this trend indicates increasing protectionism within PTAs, as the role of safeguards as a "safety valve" means that their inclusion could reflect increasing efforts to liberalise under the agreements.

The impact of safeguard provisions in PTAs on *global* (multilateral) safeguard measures is another important issue. Closer examination by others of safeguard provisions in selected PTAs has revealed that in roughly a quarter of the agreements analysed (including the North American Free Trade Agreement [NAFTA][12] and recent agreements involving the European Free Trade Area [EFTA]), safeguard provisions go beyond bilateral actions and include the option (or requirement) to exclude partner countries from global safeguard actions invoked by a member (Crawford et al., 2013).

Notwithstanding the importance of the above, the main trade remedy which is specific to agriculture in the agreements examined is the special (or specific) agricultural safeguard (OECD, 2015). Reflecting the sensitivity of trade liberalisation in the sector, a number of the PTAs analysed by others include provisions on these safeguards (Fulponi, Shearer and Almeida, 2011; Kruger, Denner and Cronje, 2009).[13] The majority of these provisions contain sunset clauses with specified dates, or sunset clauses at the time of full implementation of the agreement. Such clauses can be interpreted as going beyond the minimum required under the WTO Agreement on Agriculture, and indicating a move to more certain trading conditions between parties. However, some suggest that stringent rules on agricultural safeguards among PTA partners could generate more special safeguard actions against *non*-members (OECD, 2015).[14] Specific safeguard measures (largely specific to agriculture but not necessarily so) were found to be mainly included in trade agreements between developed and developing countries (Viljoen, 2016).

Finally, with respect to export restrictions and other export measures such as taxes and duties, the OECD has previously found that most PTAs include chapters which prohibit the use of quantitative export restrictions, except for reasons falling under Article XI of GATT (Fulponi, Shearer and Almeida, 2011).[15] However, a few agreements exempt certain agricultural products from the prohibition on export restrictions.[16] Moreover, in certain

[12] To be superceded by the United States-Mexico-Canada Agreement (USMCA).

[13] 36% of the 33 PTAs analysed by Fulponi, Shearer and Almeida (2011) and 46% (12) of the 26 agreements analysed by Kruger, Denner and Cronje (2009) were found to contain special provisions regarding the application of safeguards for agricultural goods. While Viljoen (2016) observes that the use of specific safeguard provisions (not necessarily for agriculture) has "increased in popularity" over time, it should be noted that of the 26 PTAs analysed for the 2016 study, only six (Australia-China FTA, Japan-Australia-FTA, EU-Korea-EPA, EU-Colombia and Peru FTA, SADC-EU EPA and the draft Trans-Pacific Partnership) were found to contain special agricultural safeguard provisions. In another recent study (Crawford et al., 2013), only 23% (55) of the 232 agreements surveyed included provisions on special agricultural safeguards. The distribution of these agreements across time periods and regions, as well as the content of these provisions, will need to be analysed further in order to more accurately identify trends in the inclusion of special agricultural safeguards in PTAs.

[14] Whereby, since agricultural special safeguards allow a country to increase tariffs without demonstrating serious injury or threat thereof, increased imports from all sources (non-members included) may trigger action through special safeguards to all but the agreement members if these are prohibited in a PTA or if trigger volumes are greater for members.

[15] Paragraph 2 of GATT Article XI on the General Elimination of Quantitative Restrictions provides a number of exceptions to the prohibition of quantitative export restrictions. These include temporary prohibitions or restrictions to prevent or relieve food shortages.

[16] NAFTA, for example, exempted export restrictions on agricultural products from Mexico (Mitra and Josling, 2009).

agreements (including EFTA-Turkey, Egypt-Turkey, and EU-Turkey), export restrictions are permitted if serious shortages of an essential product arise, subject to certain conditions. Few agreements (the European Union being one exception) were found to explicitly go beyond WTO rules by prohibiting export *duties*, even though these can be as detrimental to the functioning of markets as quantitative restrictions.

4. Findings on the treatment of agriculture within sampled regional trade agreements

This section presents the results of the analysis of 54 agreements (active and inactive) which entered into force between 1958 and 2017 (Annex B). 20 provision areas have been explored for this sample. The typology applied in assessing the provisions is set out in Annex A. In addition, an analysis of the market access changes created by preferential tariffs is presented. This analysis is based on 96 preferential agreements separately identified in the WITS (2018) database. The analysis is complemented with an exploration of differences in applied and most-favoured nation (MFN) tariffs applied on bilateral trade between members of 291 regional and bilateral agreements. Similarly, Rules of Origin (RoO) are analysed for the 54 agreements and others contained in the World Bank Deep Trade Agreements Database (World Bank, forthcoming; Gourdon, Gutierrez and Kowalski, forthcoming).[17] Thus the analysis of market access-related provisions extends beyond the 54 agreements for which individual provisions have been analysed.

Do the agreements cover agriculture?

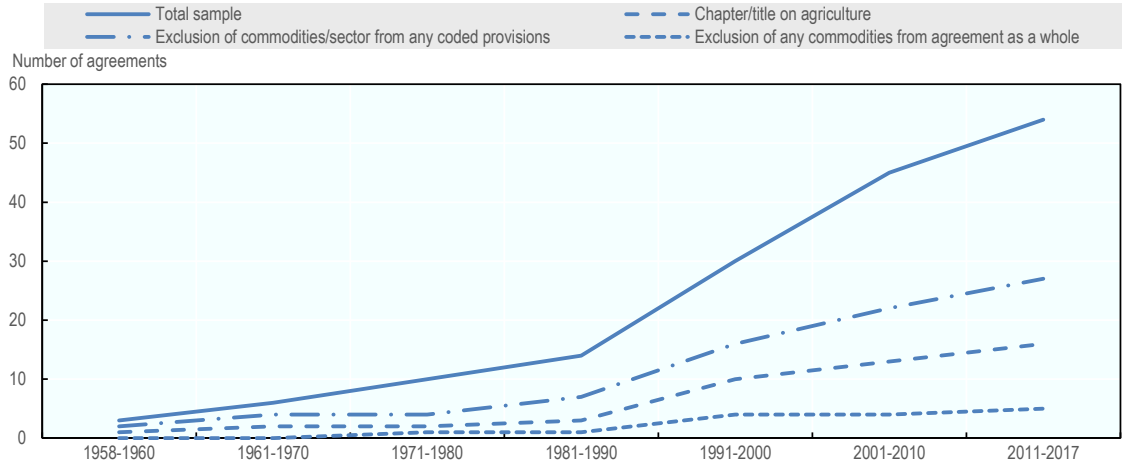
Of the 54 agreements examined for the study of 20 provision areas, all cover agriculture at least partially (Figure 2). Only four agreements, all of which involve the European Free Trade Association (EFTA), place exclusions on certain agricultural commodities from the agreements as a whole.[18] For EFTA-Ukraine (2012), EFTA-Israel (1993), EFTA-Palestinian Authority (1999) and EFTA-Spain (1980), the specific texts of the agreements include annexes covering processed agricultural products, while unprocessed agricultural products are directly covered by bilateral agricultural agreements between members and form part of the instruments establishing the free trade area between the parties. For this study, these bilateral agreements are considered to be separate agreements, even if some provisions of the EFTA-Ukraine FTA also directly apply the bilateral agricultural agreements which fully form part of the FTA. However, it is important to note that the actual trade in agricultural products between EFTA members and FTA partners is influenced by these side agreements, and thus these in combination represent the impact on trade.

[17] Regime-wide rules of origin were analysed in the 54 trade agreements listed in Annex B. Product-specific rules of origin were analysed across a broader sample of 100 trade agreements.

[18] While many agricultural commodities are excluded from many of the provisions of the EFTA Convention of 1960 itself, special provisions largely apply to these commodities instead, and so EFTA (1960) is not coded as excluding any agricultural commodities from the agreement as a whole. This agreement was revised in 2001 and now covers all major aspects of modern trade, including trade in agricultural products. In addition, EFTA States further liberalised EFTA internal trade in agricultural products in 2012.

Figure 2. Treatment of agriculture in selected regional trade agreements

Exclusions and chapters on agriculture



Note: Of the 54 agreements sampled. Agreements coded for agriculture chapters, titles or sections.
Source: Author estimates.

A much broader number of agreements exclude some agricultural commodities to varying degrees: 54% of agreements sampled exclude some agricultural commodities from at least some of the coded provisions.[19] These exclusions range from, in a small number of cases, broad exclusions from large numbers of provisions (for example, in EFTA [1960]), to much narrower exclusions in the form of reservations and exceptions for specific commodities from certain investment provisions (for example, CETA [2017]), or potential implicit exclusions of agricultural commodities from provisions on export prohibitions, for food security reasons (for example, in COMESA [1994]). However, based on the sample, there does not appear to be a strong trend to exclude agricultural products from agreements as a whole, and while exclusions from specific provisions are more common, they do not keep pace with the increase in the number of agreements over the years (Figure 2).

Despite covering agriculture in some form, most of the agreements do not contain a specific chapter, title or significant section on agriculture (only 30% of the agreements contain these). Indeed, across time, based on the sample, there is an increasing tendency to treat agriculture within the broader context of the agreement rather than to include a specific chapter pertaining to the sector. Such a tendency could be indicative of partners' willingness to treat agriculture on a more equal footing to other goods trade, potentially suggesting that the treatment of the sector within other provisions of the agreement is also expanding along with the use of these provisions. The treatment of agriculture with respect to specific provisions is explored in further detail in the following sections.

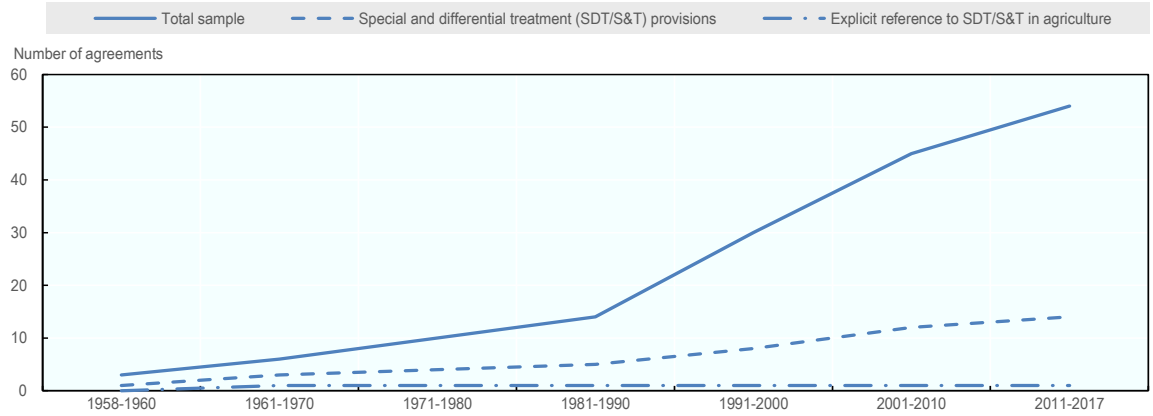
Special and differential treatment

While agriculture is included in most of the sampled agreements, it may be subject to specific special and differential treatment (SDT) provisions. In many developing countries, the structural adjustment necessitated by trade liberalisation may be constrained by rigidities both in the economy and in export patterns (such as a dependence on few export

[19] Note that exclusions from tariff concessions were not coded here, due to the inconsistent availability of tariff schedules across the sample.

commodities and markets), and a lack of effective social safety nets can mean that some workers can be significantly negatively affected. SDT, which is also incorporated within WTO agreements, aims to enable developing countries to adjust the speed and depth of commitments, and thus can enable them to meet some of the adjustment challenges arising from trade reform. SDT includes provisions for lower tariff reductions, longer implementation periods, measures to increase trading opportunities, and capacity-building support to implement technical standards.

Figure 3. Special and differential treatment



Note: Of the 54 agreements sampled.
Source: Author estimates.

Of the agreements sampled, 26% contain provisions that relate to special and differential treatment (Figure 3), although in only one case (CARIFTA [1968]) is there explicit reference to agriculture.[20] This takes the form of special arrangements for the progressive elimination of import duties by less-developed countries on goods, agricultural goods included. As such, from the examined agreements, there does not appear to be an explicit treatment of agriculture different from other commodities with regard to special and differential treatment.

SDT provisions are relatively heterogeneous with respect to scope and detail, including the elimination of duties on imports from specific members in order to lessen "differences in development" (for example, the Andean Community Agreement [1996])[21]; more favourable conditions for the reduction of duties and charges by certain members, and measures to protect the domestic output of sensitive products which are subject to trade liberalisation (for example, LAFTA [1961]); the provision of technical assistance (including LAFTA, CARICOM II [2001] and ASEAN-Australia-New Zealand [2010]); longer time-frames for the integration of developing countries within the trade area (for example, PICTA [2003]); commitments to take the situation of least-developing country (LDC) members into account when considering the application of anti-dumping and

[20] Note however that, as mentioned earlier, unilateral trade preferences (defined as "preferential arrangements" by the WTO), under which developed countries grant preferential tariffs to imports from developing countries, were not included in the sample.

[21] Articles 121 and 126.

countervailing measures, and more stringent conditions for the application of safeguard measures against these countries (for example, SAFTA [2006]); pledges to take the special development needs of specific countries into account when designing and applying technical regulations (for example, EU-Central America [2013]) and "special measures" to attract investment and industries to disadvantaged member countries and regions (for example, CARICOM II).[22]

SDT provisions have been used less frequently in the sampled agreements over time. However, given the relatively small sample size, this "trend" may simply be due to differences in the development status of various signatories to agreements over the time period, or potentially the greater number of agreements among developing countries.

Market access, export competition and producer support

This section explores market access from the perspective of tariff concessions, rules of origin, arrangements for export competition and domestic producer support measures. What is missing is an assessment of quota arrangements under bilateral and regional agreements and the extent of any increase from those applied at the multilateral level. Obtaining statistics on quota concessions, additional or reallocations of multilateral quota, was not feasible for this study. As such, it remains an area for further work.

Tariff preferences in bilateral and regional trade agreements

Agricultural tariffs remain higher than those for non-agricultural goods, with some sensitive commodities having applied tariff rates that exceed 100% (OECD, 2016).[23] Globally, there has been a reduction in applied tariffs on agro-food products since the early 2000s (OECD, 2016). Part of the reason behind these falls has been the continued implementation of WTO commitments, new WTO accessions (most notably the People's Republic of China – hereafter "China"), and also the rising number of PTAs. However, estimates to date of reductions on global applied tariffs caused by the increasing number of PTAs have been limited. Using data from the WITS database – therefore going beyond the 54 agreements for which the texts have been explored – differences between reported preference rates (at the bilateral level) in identified bilateral and regional trade agreements[24] from the most-favoured nation (MFN) rates reveals that PTAs could be playing a relatively significant role in the overall decline in tariffs in the sector, albeit limited to the parties to the agreement (Figure 4). The preference margin calculated for agro-food products, taken as a simple average across all agro-food products calculated at the HS6 digit level, reveals an increasing influence of PTAs on market access improvements. Between 1988 and 2013[25], the preference margin on agro-food products from identified bilateral and regional trade agreements almost doubled from 8.9% to 16.2%. A similar pattern, although with lower preference margins, is seen for non-agricultural goods – largely because MFN rates for such goods are also lower, thereby limiting the possible preference margin. However, what is noticeable is that the gap between agro-food and non-agro-food margins has remained stable over time, suggesting limited inroads in a relative sense.

[22] Article 143 of CARICOM II.

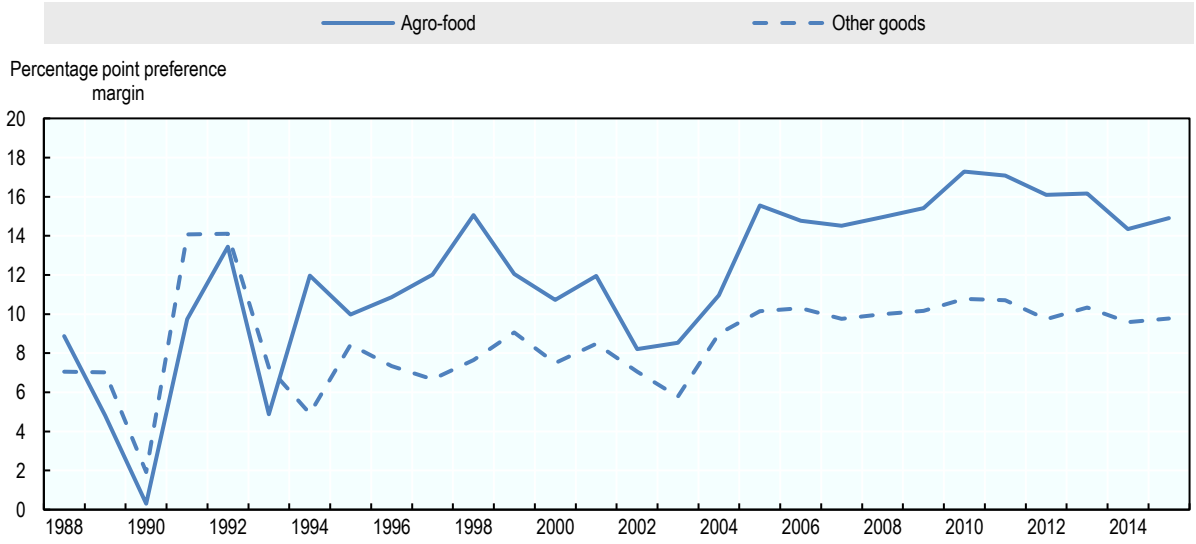
[23] Details of agricultural tariffs and changes since 2000 are explored in depth in OECD (2016).

[24] Covering 96 agreements between 1988 and 2016.

[25] Recent data on tariff rates are subject to error due to lags in country reporting of trade and tariff data. Gaps in reporting are often present for two or three years behind the most recent year available.

Figure 4. Preference margin in PTAs for agro-food products

Percentage point difference between MFN and preference rate



Note: Differences represent differences in simple averages tariffs calculated at the HS6 level. For some products in specific countries, MFN rates remain significant, and well above 100%.
Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

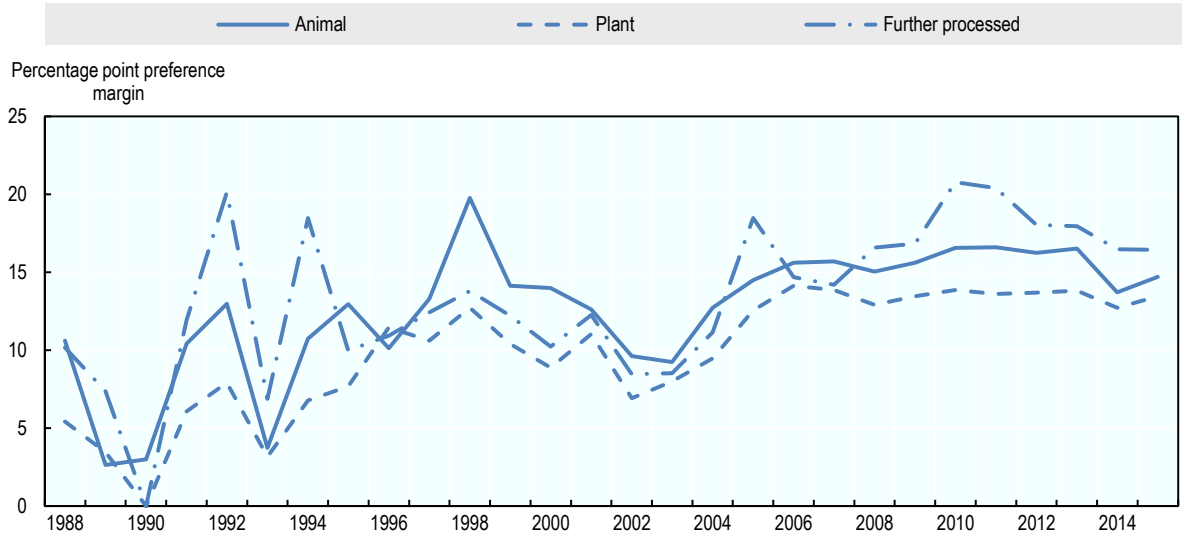
Between broad agro-food commodity groups, bilateral agreements and PTAs show similar trends in reducing tariff barriers (Figure 5). While preference margins for both animal- and plant-based products decreased in the late 1980s, more recent agreements have increased the preference margins for both commodity groups. For further-processed goods, the preference margin has increased more rapidly in recent years, suggesting that recent agreements have provided greater market access among the parties, or potentially that countries are making use of preferences in existing agreements when previously they did not.[26]

Part of the reason behind the increasing preference margin relates to the MFN rates that apply to agro-food products *not* traded within PTAs. The increasing number of PTAs has led to a significant increase in the number of tariff lines (at the HS6 digit level) that are subject to preferential rates (Figure 6). However, occurring at the same time is an increase in total agricultural trade (OECD, 2016; Greenville, 2017), which is increasing the number of "active" trading lines – that is, those with recorded trade flows. This is occurring both between countries that are parties to an agreement and those which are not. As such, part of the increase observed in number of covered trading lines is because more trade is occurring. Despite this, the share of covered agro-food trading lines has increased from around 19% in 1994 to 39% in 2015 (latest year of the dataset – more details on a broader definition of preference margins and resulting agreement trade coverage is provided below).

[26] The data on preferences only records a preferential rate when a trade flow is present. Thus, a preferential margin is only calculated on the basis of actual trade flows rather than the full number of tariff lines present, as countries do not report preferential rates unless trade is occurring. As such, as utilisation of an agreement increases, so does the potential for a higher preference margin.

Figure 5. Preference margins across broad agro-food product groupings

Percentage point difference between MFN and preference rate

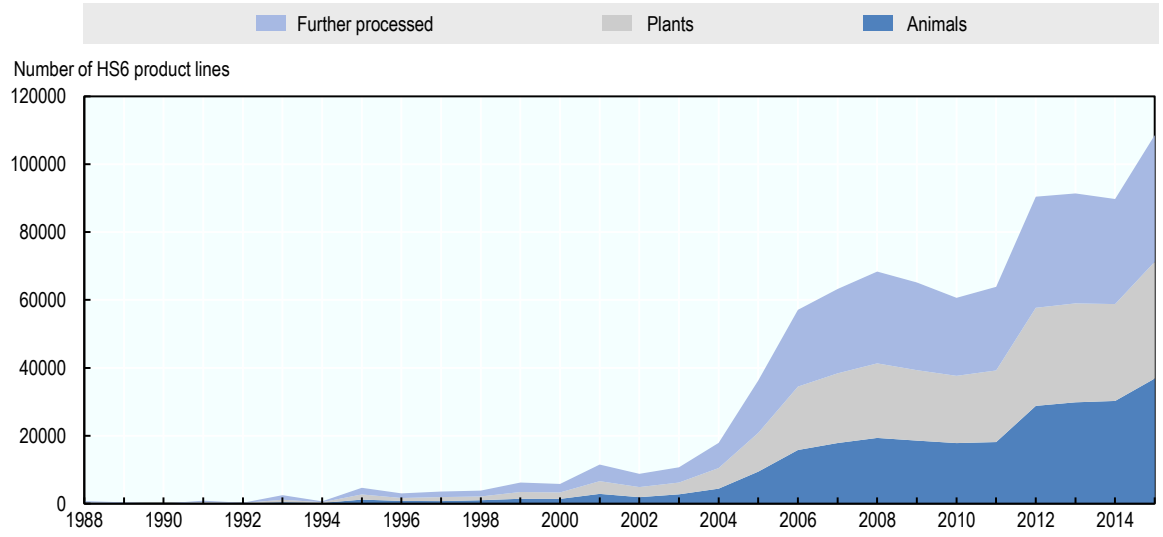


Note: Animals: Animal products under HS2 chapters 01 to 05, Plants: plant products under HS2 chapters 06 to 14, Further processed: remaining products that are classified as agro-food products. Differences represent differences in simple averages tariffs calculated at the HS6 level.

Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

Figure 6. Number of tariff lines attracting a PTA preference margin

Number of bilateral HS6 tariff lines with preference rates



Note: Animals: animal products under HS2 chapters 01 to 05, Plants: plant products under HS2 chapters 06 to 14, Further processed: those remaining products that are classified as agro-food products. Product line counts made at the HS6-digit level.

Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

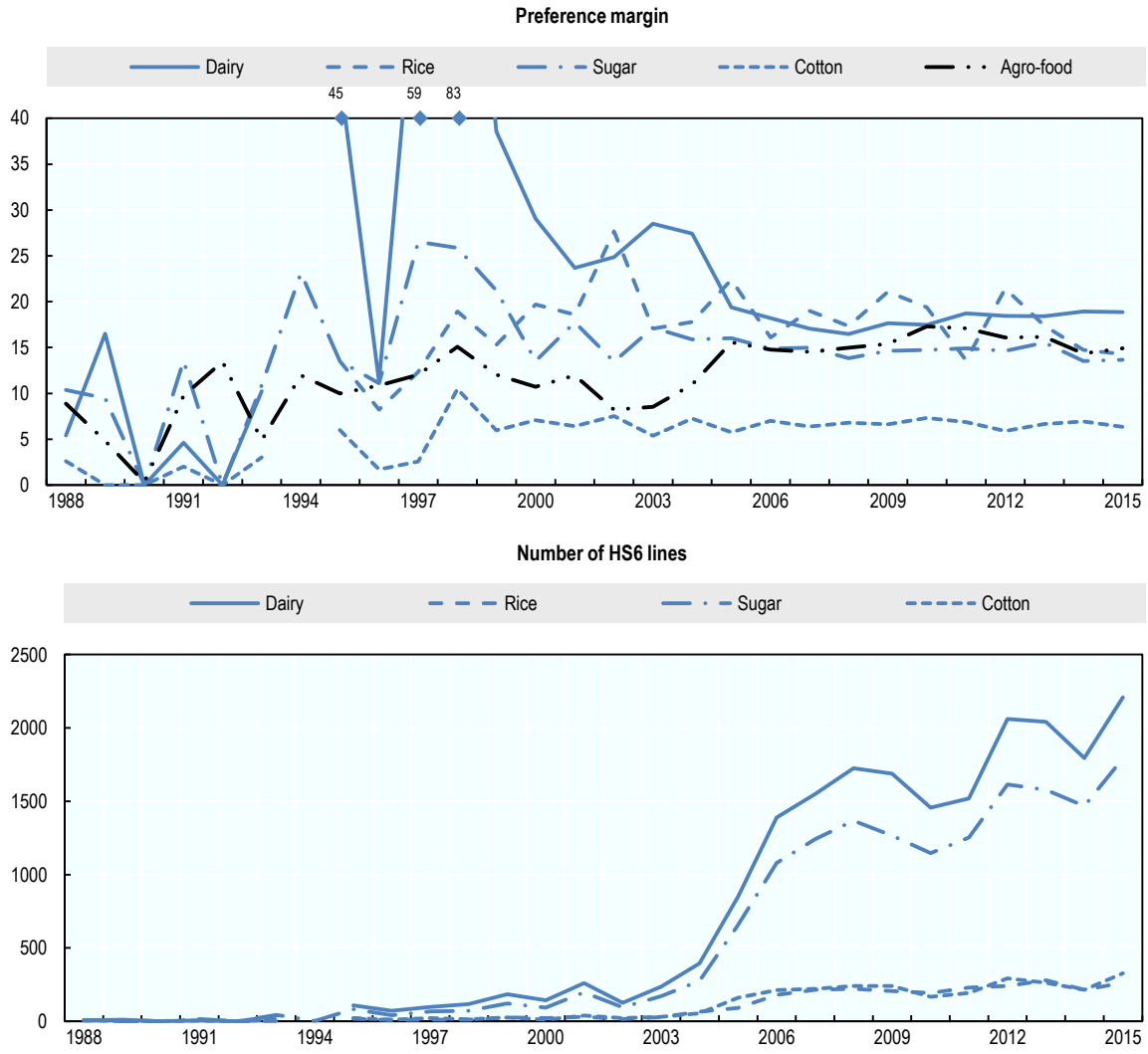
The increased coverage in agro-food product lines between countries, where a preference margin has been identified and linked to a specific agreement, has occurred across the three product groups explored. This trend suggests that in aggregate, PTAs are not creating tariff cuts in one broad sector to a greater extent than others. In other words, both agriculture and food products are being covered.

Despite the liberalisation efforts seen, even within broad product groups, countries provide support to agricultural commodities on a very unequal basis (OECD, 2017b; Greenville, 2017; OECD, 2018b). In 2015-17, rice, cotton and sugar were the most intensively-supported sectors measured by the OECD Producer Support Estimate, with dairy (raw milk), wheat, rapeseed (canola) and maize also attracting high levels of absolute support. In the context of bilateral and regional trade agreements, focusing on rice, cotton, sugar and dairy, the liberalising effects are seen to differ (Figure 7). For all commodities, PTAs have increased the level of market access as measured by the preference margin since 1988. However, for rice, cotton and sugar, this trend has been stagnant since the 2000s, while for dairy, initial high (very high) preference margins have fallen.

The changes seen in preference margins are underpinned by the different coverage of agreements. For dairy and sugar, there has been a sharp increase in the number of HS6-digit bilateral tariff lines covered by preferences, whereas for cotton and rice, there has been virtually no change. Part of the increase in covered lines is related to an increase in active trading lines that is occurring within and outside the 96 agreements covered – simply put, more trade is happening between more countries. Increases in "active" trading lines have been greatest in dairy and sugar, with lesser increases in rice and cotton. In percentage terms, all products have seen increased coverage of active trading lines covered by agreements – with greater increases seen for dairy than other products. However, given the limitations of the database which has only identified preference use, it is difficult to assess the whether preferential agreements have increased market access through tariff reductions for all sensitive sectors – including rice and cotton – despite the apparent greater success seen with respect to sugar and dairy products. This issue is assessed in more detail below.

Figure 7. Preference margins and tariff lines for sensitive products

Percentage point difference between MFN and preference rate and number of bilateral HS6 lines covered



Note: Differences represent differences in simple averages tariffs calculated at the HS6 level. The number of tariff lines covered is also biased by the number of active trading lines in each category. There are fewer trading lines in rice and cotton in total, with a slower growth over time compared with the other products explored.
Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

Exploring tariff concessions for a wider array of agreements

It is difficult to estimate the true impact of bilateral and regional trade agreements on reductions in agro-food tariffs. The WTO database on use of preferential tariffs only identifies 96 regional and bilateral trade agreements. Furthermore, not all countries report trade flows specifying the preferential rate that has been used.

To complement the analysis above, preference margins were explored under a methodology that seeks to identify the effect of margins by using applied versus MFN tariffs. Data on applied and MFN tariffs are available for most countries on a bilateral basis. In addition to this, the parties to all current bilateral and regional trade agreements are also known. Coding the bilateral relationships covered by bilateral and regional trade agreements – that

is, identifying trade flows between countries that are a party to an agreement – and matching this to applied and MFN tariff levels, provides a means to capture the impact of trade agreements. Specifically, taking the difference in applied and MFN rates for countries with an agreement could provide a proxy for the level of tariff concessions made under an agreement. This will of course overstate the preference margin in instances where a country unilaterally applies a below-MFN tariff rate in the absence of the agreement – and indeed, for a number of countries, there is significant difference in bound and MFN rates (OECD, 2016; Greenville, 2015). To overcome this to some extent, computing the preference margin on non-agreement trade flows between country pairs that are not covered by an agreement provides some check on this (it provides the counterfactual or real comparison base). However, it should of course be noted that the liberalisation measured remains partial and limited to members of the groups of agreements explored. As such, in line with the above, the extent of trade diversion that is created is not readily observed, and the broader impact on promoting global competition in agriculture markets, including in the context of GVCs, cannot be observed.[27]

In total, 291 agreements were coded for the period 1993 to 2017 to match the above analysis. The coding reveals that between 1993 and 2017, 100 273 year-country pairs were covered by a trade agreement. Of these, 89% were covered by only the one agreement, with 10% by two agreements and 1% by three of four agreements (no more than four agreements covering one bilateral relationship were recorded). Overall, the share of total global agro-food trade between countries covered by the 291 bilateral or regional trade agreements has increased from 27% in 1993 to 62% in 2017.[28]

The results from the analysis are in line with those of the smaller set of trade agreements – that bilateral and regional trade agreements are delivering increases in market access for agro-food products among the parties (Figure 8). Furthermore, the preference margin has been growing over time, increasing from an average of 1.3 percentage points for the period 1993-95 to 5.6 percentage points for 2014-17.[29] At the same time, for agro-food trade flows where there were no agreements, there was a small increase over the period, from 0.3 percentage points to 0.7 percentage points. This suggests that bilateral and regional trade agreements have increased the effective level of tariff cuts among the parties from 1 percentage point to 5 percentage points over the period.

Comparing regional and bilateral agreements, similar levels of preference margins appear to have been negotiated. Over the entire period, the average preference margin on agro-food products for bilateral agreements was 3.1 percentage points, with that of regional trade agreements at 3.4 percentage points (the difference in applied and MFN tariffs in the absence of an agreement was on average 0.5 percentage points).

[27] See Greenville et al. (forthcoming) for a discussion of the impacts of PTAs on trade in agro-food GVCs.

[28] Estimates vary depending on the database used. Estimates are taken from mapping Comtrade data for agro-food total exports or imports traded between agreement partners. Alternatively, if TRAINS data is used, the estimates differ, with coverage rising from 7% in 1993 to 46% in 2017.

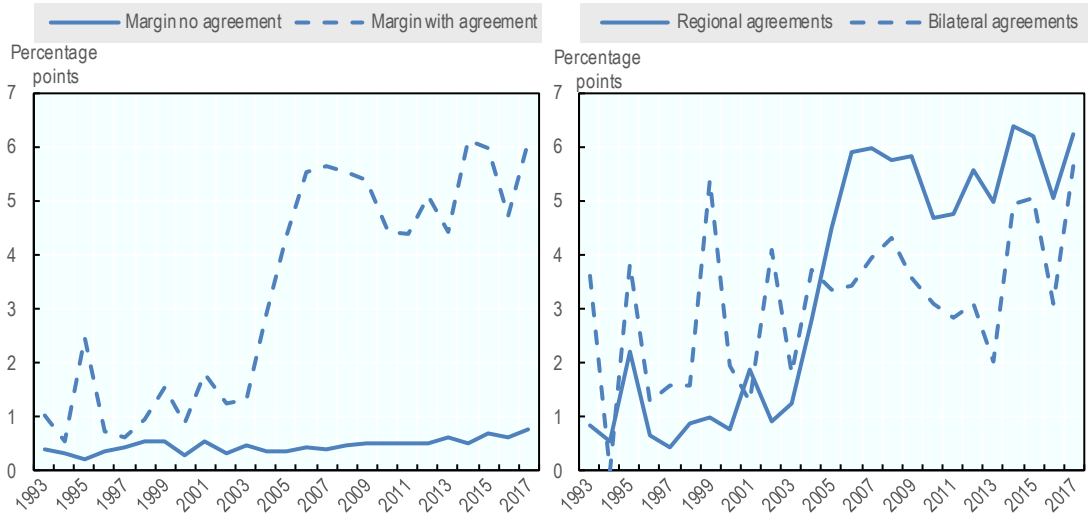
[29] The larger sample of tariff data has a greater number of missing observations in any given year as a number of countries do not report their tariff levels every year. Due to this feature of the dataset, 3-year averages are presented instead of individual years.

Beyond the absolute level of tariff concessions, the relative size of the reductions are important. Small preference margins may be given on very high tariffs, creating effectively limited impacts. To measure the relative impact of concessions, the preference "depth" was calculated. This is equal to the preference margin expressed as a share of the MFN tariff rate. A depth estimate of 100% means that the preference margin is the full MFN rate, and thus tariffs are reduced to zero.

The trend in the depth of the preference margins follows that of the absolute level – in other words, increasing over time (Figure 9). However, the estimates also reveal the extent to which agro-food tariffs are reduced. For bilateral trading arrangements not covered by one of the 291 agreements examined, the average depth of unilateral or non-reciprocal concessions on agro-food products has risen from 4% of the MFN level in 1993-95 to 9% in 2015-17. The depths of concessions for countries with an agreement rose from 13% to 60% over the same period – suggesting that the average applied concession under bilateral and regional trade agreements on agro-food trade among the parties overall is 60%. With around 60% of agro-food trade covered by these agreements, the combination of the depth of tariff reductions and this coverage suggests fairly significant liberalisation. However, given the nature of the agreements, the efforts remain partial and limited to members of the groups of agreements explored. As such, while market access gains are seen, the extent of trade diversion that is created is not readily observed. In particular, preferential concessions may not provide access for the most-efficient producers to a market, meaning that when viewed globally, distortions remain.

Figure 8. Broader evidence on agro-food preference margins from trade agreements

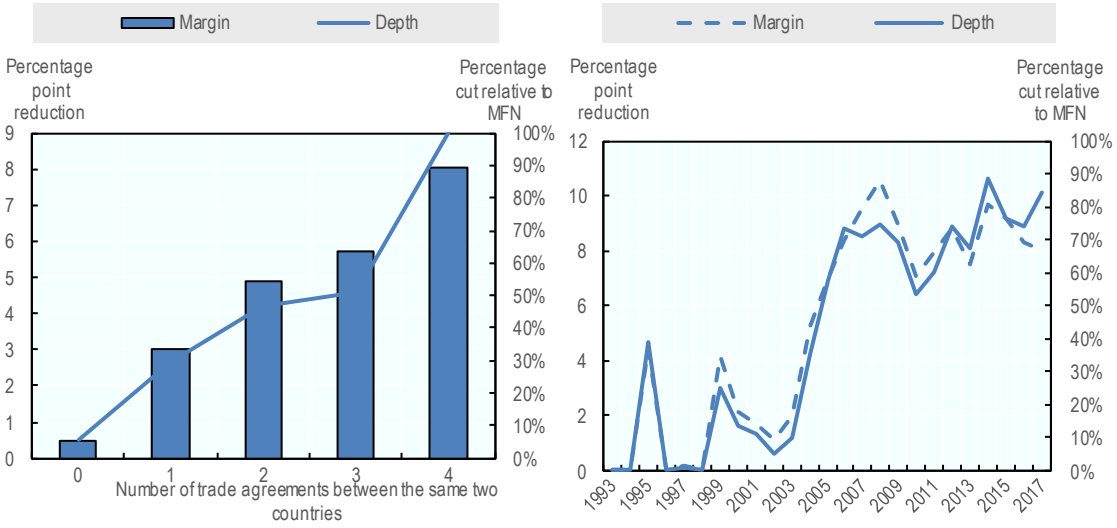
Estimated preference margin, percentage point difference between applied and MFN tariffs



Note: Margin represents the percentage point difference in applied and MFN tariffs based on whether or not a country pair has a bilateral or regional trade agreement in place. A total of 291 trade agreements were examined.
Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

Figure 9. Number of agreements and level and depth of preference margin

Average by group and across countries across time



Note: Margin represents the percentage point difference in applied and MFN tariffs based on whether or not a country pair has a bilateral or regional trade agreement in place. Depth represents the difference between applied and MFN tariffs relative to MFN levels. A depth estimate of 100% means no duty and concession is equal to 100% of the MFN rate. A total of 291 trade agreements were examined.

Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

Around 11% of country pairs across the time period have more than one active and in force trade agreement covering their trading relationship. This shows that for some, there are a number of overlapping agreements, but for the vast majority of trading relationships, only one trade agreement is in place (excluding non-reciprocal trade agreements). A question exists as to whether the additional trade agreements are associated with greater preference margins – that is, are they additive in a market access sense or not. A look at the preference margin and depth of concessions shows that bilateral flows which are governed by more than one agreement have *greater* margins and reduce to a greater extent the MFN rate. When viewed over time – to gain a picture of the additional agreements entering into force (and to some extent the deepening of existing agreements), again the increases in market access are evident. These results suggest that additional agreements covering the same two countries also promote additional market access.

Concessions made on highly protected products

As noted above, not all agro-food products receive the same attention from policy makers. Three products in particular – dairy, rice, sugar – are often kept away from liberalisation efforts at either the multilateral or regional level. Looking both across these products and across a number of other traded agricultural products reveals, on average, more equal treatment of agricultural products than those seen above (Table 2).[30] While the absolute preference margins differ, the relative *depth* of the cuts made across these products is similar – around 30% of the MFN tariff. The concessions made for each of these products,

[30] Products selected on the basis of those which receive the largest proportional support as measured by the OECD Producer Support Estimate. High relative levels of support are seen for rice, cotton sugar, rapeseed (included in other oilseeds), maize, wheat, milk (dairy), beef and veal, along with pig meat (OECD, 2018b; 2017b; Greenville, 2017).

separately analysed, are significantly greater than the concessions made on trade flows not covered by an agreement, which average around 4% of the MFN rate. This difference is suggestive of bilateral and regional trade agreements making progress on market access for some of the world's most sensitive agricultural products, despite limited impact seen in some of the major agreements as highlighted above.

Table 2. Preference concessions across sensitive agricultural products

Estimated preference margin and depth of concession, 1993-2017

	Beef	Dairy	Rice	Sugar	Cotton	Pig meat	Maize	Wheat	Soybeans	Other oilseeds
Average with agreement	34%	28%	28%	29%	35%	28%	31%	26%	40%	33%
Average without agreement	3%	2%	5%	4%	1%	3%	4%	3%	4%	7%
Average margin with agreement	3.6	4.3	3.1	3.5	1.0	4.1	2.8	2.5	1.8	1.5
Average margin without agreement	0.4	0.5	0.3	0.5	0.0	0.5	0.2	0.3	0.1	0.2

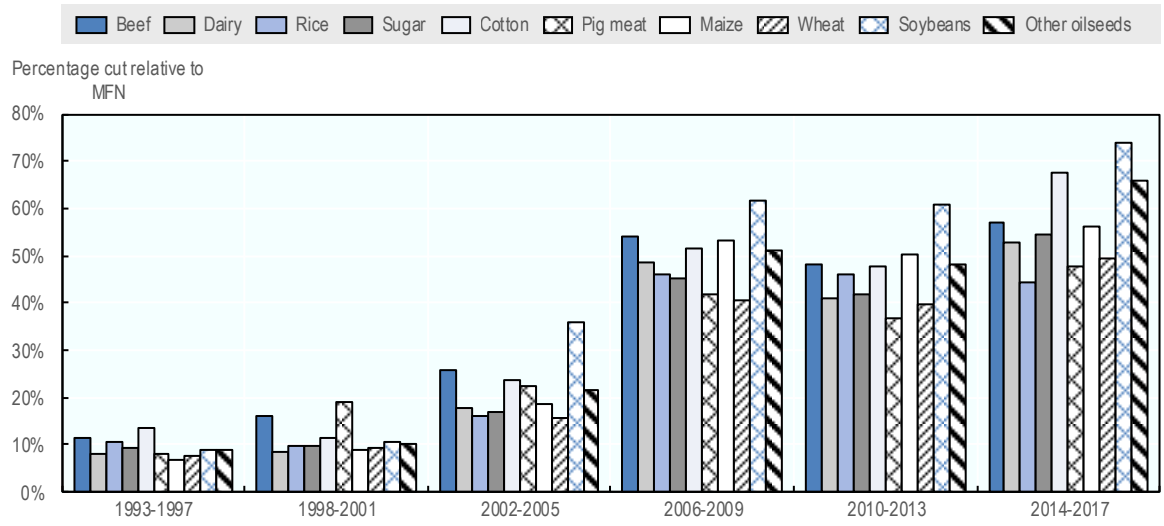
Note: Margin represents the percentage point difference in applied and MFN tariffs based on whether or not a country pair has a bilateral or regional trade agreement in place. Depth represents the difference between applied and MFN tariffs relative to MFN levels. A depth estimate of 100% means no duty and concession is equal to 100% of the MFN rate. A total of 291 trade agreements were examined.

Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

The concessions made on these sensitive products, however, are more recent (Figure 10). Sizeable increases in the depth of concessions made on these products are apparent from 2006 onwards, where a step change can be seen. This trend appears to have been maintained in subsequent periods, but progress has not been further increased in a relative sense – however, coverage has increased.

Figure 10. Depth of preference concessions across products across time

Estimated depth of concession, 1993-2017



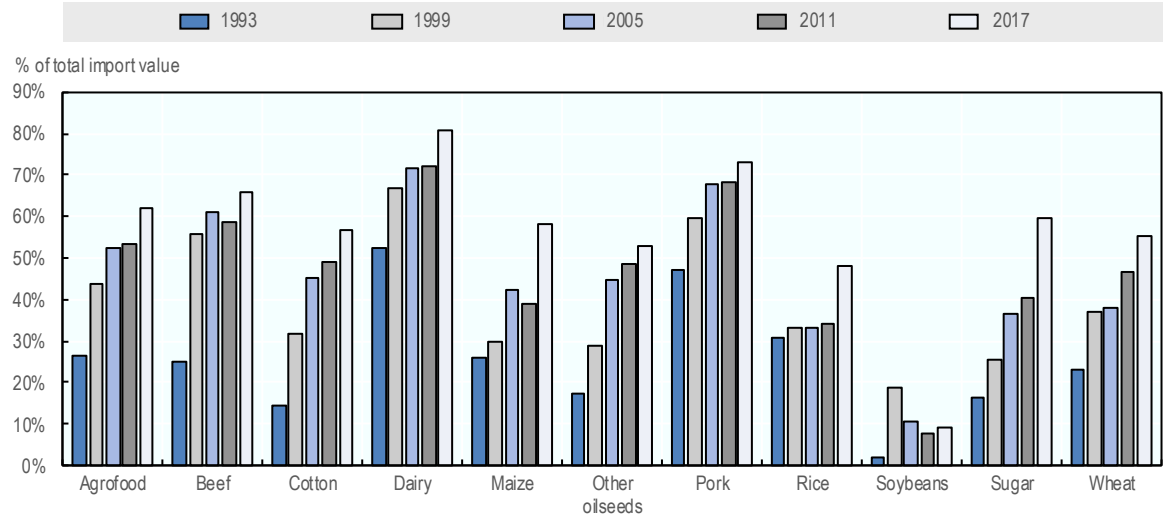
Note: Depth represents the difference between applied and MFN tariffs relative to MFN levels. A depth estimate of 100% means no duty and concession is equal to 100% of the MFN rate. A total of 291 trade agreements were examined. Cumulative estimates for all agreements (not only newly-signed) over time.

Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

Beyond the rising level of concessions being made on these products, for all except soybeans, there has been a rising share of world trade occurring between countries that have trade agreements in place (Figure 11). The highest rates are seen for dairy products and pig meat at 81% and 73% of total trade value in 2017 respectively. Soybeans have fallen from 19% in 1999 to 9% today, likely related to trade between the United States and China which is not covered by any agreement. While causation is not examined here (whether tariff reductions have increased trade, or expansion in agreements have increased coverage), the results nevertheless point to the importance of bilateral and regional trade in governing agro-food trade, particularly in sensitive products.

Figure 11. Coverage of trade by bilateral and regional agreements by product

% of total import value selected years



Note: UN Comtrade data used for calculation by exploring bilateral trade between countries that have a bilateral or regional trade agreement in place.

Source: Author estimates based on WITS (2018), *UNCTAD Trade Analysis Information System (TRAINS)*.

Rules of Origin

Bilateral and regional trade agreements use RoO to restrict the preference concessions to parties to the agreements. These rules are used to deem that a product was produced in a member country and is thus eligible for preferential market access. RoO are primarily used to prevent what is termed "trade deflection" – whereby products from non-participating countries reach a high-tariff trade agreement member via the transhipment of the product through a low-tariff member. The WTO has developed a Common Declaration on preferential RoO that sets out guidelines for the development and application of RoO within agreements.[31] These declare that RoO should be clearly defined and based on a positive standard. They also include enforcement and transparency elements (WTO, 2019).

[31] Annex II of the WTO Agreement on Rules of Origin. The WTO has also established separate principles for the design of non-preferential RoO, under Article 9 of the Agreement on Rules of Origin.

RoO applied to agricultural products can require substantial transformation – the product must have changed Harmonised System (HS) chapter, heading or sub-heading – or require a specific technical process, minimum value-added content, or production wholly within a member country (Box 2). RoO are often also combinations of the above, with products required to meet both a change in tariff classification and some other measure.

Box 2. Types of rules of origin

RoO are criteria (or combinations thereof) that must be met for products to quality for preferential treatment. The criteria can take the form of:

- **Change in tariff classification (CTC)** of the good from the classification of the imported inputs from non-agreement members. CTC may involve transforming the products to alter the classification at the chapter (HS 2-digit), heading (4-digit), subheading (6-digit) or even a tariff item level (8 or 10-digit) level. Exceptions are sometimes added to CTC requirements, prohibiting the use of non-originating materials from a particular HS subheading, heading, or chapter, thereby making the requirement more restrictive.
- **Value content (VC)** criteria, which requires the product to acquire a minimum local value (usually between 30% and 60%) in the exporting country. The value content requirement can be expressed as a minimum percentage of the product's total value, a minimum difference between the value of the final good and the costs of the imported inputs; or a minimum value of parts out of the total.
- **Technical requirement (TR)** criteria, which prescribes or prohibits specific manufacturing operations in or inputs from the originating country. For example, TRs feature in RoO governing trade in textile products.

Source: Cadestin, Gourdon and Kowalski (2016).

The design of rules of origin matters, and can influence the extent of liberalisation that can occur as they restrict the type or level of trade that can access the preferential treatment. Generally, the higher the level of change under a RoO that requires a change in tariff classification, the more restrictive the RoO is considered to be (Estevadeordal and Suominen, 2008; Estevadeordal, 2000). Combinations of RoO are also considered to increase the restrictiveness of the RoO used. According to Estevadeordal et al. (2009), Value Content (VC) or Technical Requirement (TR) rules attached to a given Change in Tariff Classification (CTC) rule increase the restrictiveness of RoO.

Additional findings on RoO restrictiveness point to some instances of differences between measures. Harris (2007) suggests that value content stringency can rise with the share of local value-added required, and that these may thus be as restrictive as a change in heading rules. Similarly, it is suggested that technical requirement stringency rises with the level of technical change specified. Exceptions included in RoO, as they reduce the range of permitted third-country inputs and are specified only in cases where they are actually meaningful for the production of the good in question, are considered to indicate an intention to be restrictive. Studies have found that the utilisation of preferences within bilateral and regional trade agreements is positively related to the preference margin but negatively related to the restrictiveness of the RoO (Cadot et al., 2006). However, more broadly, it remains difficult to determine the restrictiveness of RoO, with studies finding that a CTC rule is not more restrictive than a VC rule or a TR test.

On the other hand, where producers are allowed to choose from alternative forms of RoO, this indicates a *less* restrictive environment than single RoO requirements. The administrative burdens of qualifying for the tariff preference can be significantly different for different types of rules, and as such, the existence of alternatives indicates a belief that some traders would face lower compliance costs under one or the other alternatives.

RoO requirements for agro-food products were explored for both the 54 agreements covered in depth in this report along with those which are captured in the World Bank Deep Trade Agreements Database (World Bank, forthcoming).[32] Overall, looking at product-specific rules (PSR), RoO applied to agriculture make greater use of more restrictive RoO such as change in chapter (CC) and wholly obtained (WO) requirements (Table 3).

Table 3. Product-specific rules in RoO for agro-food trade

Share of HS6-digit products covered by different types of product-specific rules (%)

HS Section	CC	CC_ EXC	CC & VC/TR	CC_or_ VC/TR	CH	CH_ EXC	CH_& VC/TR	CH_or_VC/TR	CS	CS_ EXC	CS_& VC/TR	CS_or_VC/TR	TR	VC	WO
Live animals	39	7	0	1	10	1	0	13	0	0	0	1	3	5	20
Vegetable prod	38	1	0	2	12	1	0	18	2	0	0	1	3	6	16
Fats and Oil	29	7	3	4	10	4	1	19	2	0	0	0	4	7	9
Processed food	22	9	2	3	18	3	2	20	2	0	0	1	5	9	5
TOTAL	11	2	3	1	21	4	4	23	6	0	1	4	6	12	3

Note: CC: change in chapter, CH: change in heading, CS: change in sub-heading, TR: Technical requirement, VC: Value content, WO: Wholly obtained, EXC: Exceptions.
Source: Author estimates from World Bank (forthcoming), *Deep Trade Agreements Database*.

Heterogeneity in rules of origin among agreements

Countries can have multiple RoO due to participation in multiple agreements. These differences can create a "spaghetti bowl" effect whereby traders find it hard to navigate the different requirements for different markets, raising the costs of trade. A significant consequence of divergence in RoO across agreements is that an exporter faces different RoO in different markets. Depending on markets served, it is possible that the most restrictive of these can become binding and lock production processes into serving one market to the exclusion of others.

Furthermore, it is possible that compliance costs with multiple RoO are more than additive – the total costs exceed the sum of individual compliance activities. This can occur due to the additional co-ordination effort that is required to comply with multiple as opposed to single RoO. In such cases, the existence of multiple agreements would add to the trade restrictiveness of any one individual agreement. Thus, the greater the heterogeneity in different RoO for a given country among agreements, the greater the compliance costs imposed.

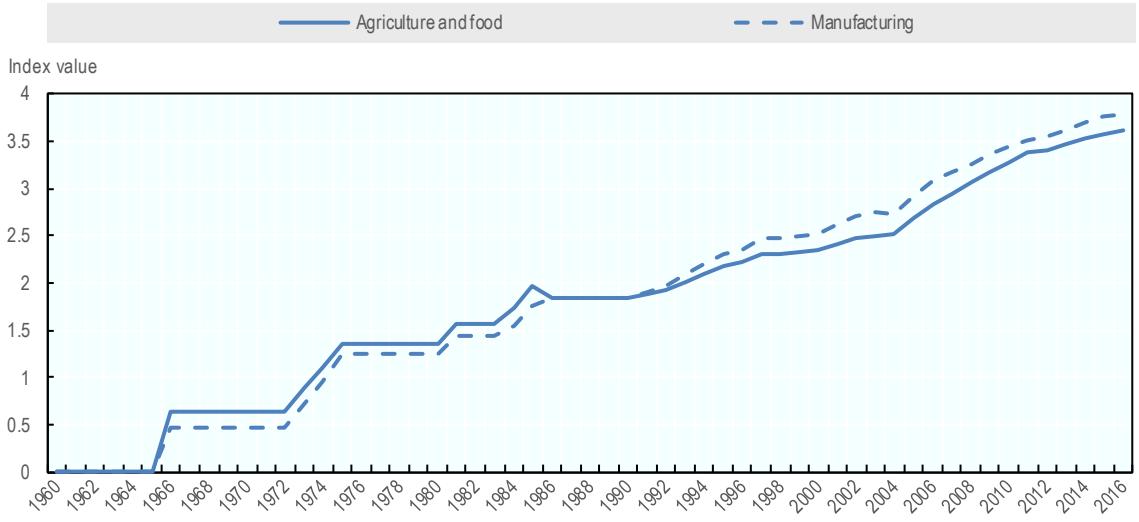
[32] Only 23 of the 54 agreements covered in depth are included in the Deep Trade Agreements Database.

For the agriculture and food sectors, the heterogeneity scores of different RoO are similar or below those observed in manufacturing sectors.[33] Over time, with the increasing number of trade agreements, there has been an upward trend in heterogeneity scores, suggesting that additional agreements are using different RoO (Figure 12).

The restrictiveness of a product-specific rule (PSR) in a country is considered to be at its highest when agreements invoke more than one method for determining origin. In other words, membership of multiple agreements which use dissimilar rules is considered to be more restrictive, while membership of only a single agreement is considered the least restrictive according to this criterion. As agricultural sectors often rely on the same type of PSR rules across agreements, their heterogeneity scores are often lower than that of manufactured products (Figure 13). That said, in specific cases, processed food is found to be more heterogeneous than the average of manufacturing industries (albeit still less than textiles).

Figure 12. Heterogeneity scores for RoO over time

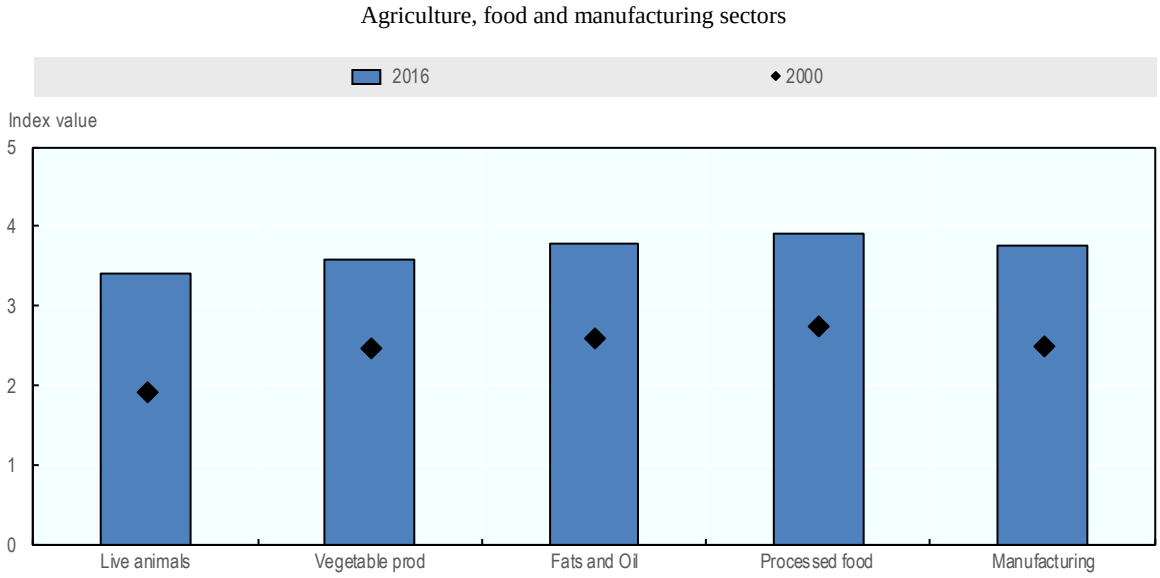
Agriculture and food and manufacturing sectors, 1960-2016



Note: Scores represent the extent of differences in PSR at the HS6 levels for countries due to membership in multiple agreements. Higher scores mean greater differences.
Source: Author estimates from World Bank (forthcoming), *Deep Trade Agreements Database*.

[33] To investigate the costs associated with different RoO, an index capturing the divergence of RoO for a country across its different trade agreements has been estimated. A Shannon-type index is used, with results indicating the number of different RoO that apply to a product at the HS6-digit level in a country because of multiple PTAs with different PSR. The index is calculated as $H = \sum_{i=1}^{s} -(P_i * lnP_i)$ where: H is the Shannon diversity index, Pi fraction of the entire population made up of PSR i, S the number of existing PSR in the classification.

Figure 13. Heterogeneity scores for different agro-food products, 2000 and 2016



Note: Scores represent the extent of differences in PSR at the HS6 levels for countries, due to membership in multiple agreements. Higher scores mean greater differences.
Source: Author estimates from World Bank (forthcoming), *Deep Trade Agreements Database.*

Certification processes

In an effort to reduce some of the compliance costs of RoO, some agreements have introduced self-certification processes. These provisions are general and not agriculture-specific. Self-certification largely minimises the involvement of a government (or external) authority in the issuing process. Certification by the importer (such as in the Comprehensive and Progressive Trans-Pacific Partnership [2018]) is considered to be a more flexible option than certification by the exporter/producer (such as in NAFTA [1994]), which in turn is more flexible than certification by authority or a combination (authorised exporter scheme).[34]

Beyond the process itself, the validity period of the certification also matters. A longer period allows the parties more time to conclude the importation process, claim preferential treatment, and correct any setbacks that may arise. Record-keeping requirements are also important in order to guarantee that the producers and the authorities have access to this data in case there is need to verify origin.

Exemptions and amendments for minor errors help to ease the potential restrictiveness of RoO. Indeed, if the threshold for exemptions is sufficiently high, then small export parcels – often from SMEs – do not have to go through the complicated RoO certification process. In the same vein, in the event of minor errors on the certificate, if the authority allows the certificate to be modified, or re-issued, instead of automatically denying preferential treatment, costs are likely to be lower.

The final aspect of certification relates to the verification process. Indirect verification – generally a detailed questionnaire sent to the exporting party – is considered as less

[34] The World Customs Organization Guidelines on certification of origin encourages, in the first instance, the use of self-certification schemes by importers and exporters.

restrictive and less costly than direct verification – generally a visit by the importing authorities to the exporting party.

Within the 54 agreements explored in this report, provisions for amendments of minor errors within the RoO certification process is present in 50% of the agreements (lower than that of the broader set of agreements within the Deep Trade Agreements Database) (Table 4). In terms of verification processes, most make use of indirect verification.

Table 4. Use of certification processes across a broader set of agreements

Provision	Result
Self-Certification	22%
Authority Certification	46%
Combined Certification	32%
Average validity in months	13 months
Average record keeping in years	3.5
Average amount for exemptions	1055 (USD)
Amendment for minor errors	56%
Verification	
Not stated	16%
Direct (importer)	38%
Indirect (exporter)	46%
Both	0%

Source: Author estimates from World Bank (forthcoming), *Deep Trade Agreements Database*.

Accumulation and *de minimis* rules

Accumulation provisions (also termed cumulation) determine which products, processes and countries are able to participate in the production of the product and thus count as "originating" in agreement partners. Bilateral cumulation is the minimal standard, and is viewed as being more restrictive than diagonal accumulation, which allows the inclusion of partners from other agreements requiring a similar PSR. Both of these rules are, in turn, more restrictive than full accumulation, which allows the use of non-originating material that has been transformed within agreement members' countries, but which does not otherwise meet the definition of "originating". The least-restrictive rule is known as cross-accumulation, which allows non-originating goods from other preferential agreement partners to be used even if the PSR rules differ. Again, these rules are not agriculture-specific. Most agreements in the sample use the most-restrictive accumulation rules – indeed, no agreements sampled use the least-restrictive method (Table 5).

Table 5. Use of accumulation/cumulation rules

Within sample of 54 agreements

Details	Type				
Quantitative (whom to cumulate)	Intra Agreement	Inter agreement	Intra agreement	Inter agreement	
Qualitative (how to cumulate)	Same PSR/OR	Same PSR/OR	Same PSR/All	Same PSR/Any	
Type of compliance	Bilateral	Diagonal	Full	Cross	None
% of agreements	67%	18%	7%	0%	7%

Note: PSR: product-specific rule, OR: originating within region, All: transformed but not originating, Any: any input.
Source: Author estimates from World Bank (forthcoming), *Deep Trade Agreements Database*.

The *de minimis* rule, also called a tolerance rule, can be found in several origin regimes. It is an important flexibility, as it allows a product to be considered to have complied with the strict Change in Tariff Classification rule, providing that the value of the non-originating inputs does not exceed 10% of the final value of the good. As a general practice, the more extensive the *de minimis* rule, the more liberal the RoO regime. As for cumulation rules, these rules are not agriculture-specific. Of the 54 agreements examined in this report, this rule, set at 10% final value, was present in 60%. The absorption rule also brings flexibility as it allows the use of more non-originating inputs. It allows for non-originating inputs contained in intermediate materials which had acquired originating status, and which are used in the subsequent manufacturing of a good, to not be taken into account in the origin determination of the final product. The absorption rule was present in only 35% of the agreements covered in this report. It should be noted that of those two alternatives, tolerance tests are treated as the most liberal because they are regarded as providing the greatest scope for raising the level of "originating" content.

Export subsidies, taxes and restrictions

Export subsidies

Export subsidies have been used as a tool to support agriculture, with significant market-distorting effects. Export subsidies include both direct subsidies and indirect subsidies via export measures with equivalent effect, such as export credits, export credit guarantees, export insurance programmes and certain types of food aid. Their use is much less common today, due both to multilateral commitments to abolish these forms of subsidies (Box 3), and high commodity prices in recent years.

Box 3. WTO commitments to abolish agricultural export subsidies

Until recently, export subsidies of agricultural products were treated much more permissively by the WTO than industrial products. The WTO Agreement on Subsidies and Countervailing Measures (SCM) generally prohibits the use of export subsidies, while the Agreement on Agriculture (AoA) permits these for agriculture while capping the total value and volume of these payments and making them subject to reduction commitments.

In December 2015, WTO Members agreed on a Ministerial Decision on Export Competition, under which developed countries pledged to immediately eliminate subsidies for farm exports, with the exception of scheduled export subsidies for dairy and processed products and pork, which were permitted to be phased out by the end of 2020. Developing countries were permitted until the end of 2018 to phase out export subsidies, but will be able to continue to cover marketing and transport costs for agriculture exports until the end of 2023. The poorest and food-importing countries were granted until the end of 2030 to meet their commitments.

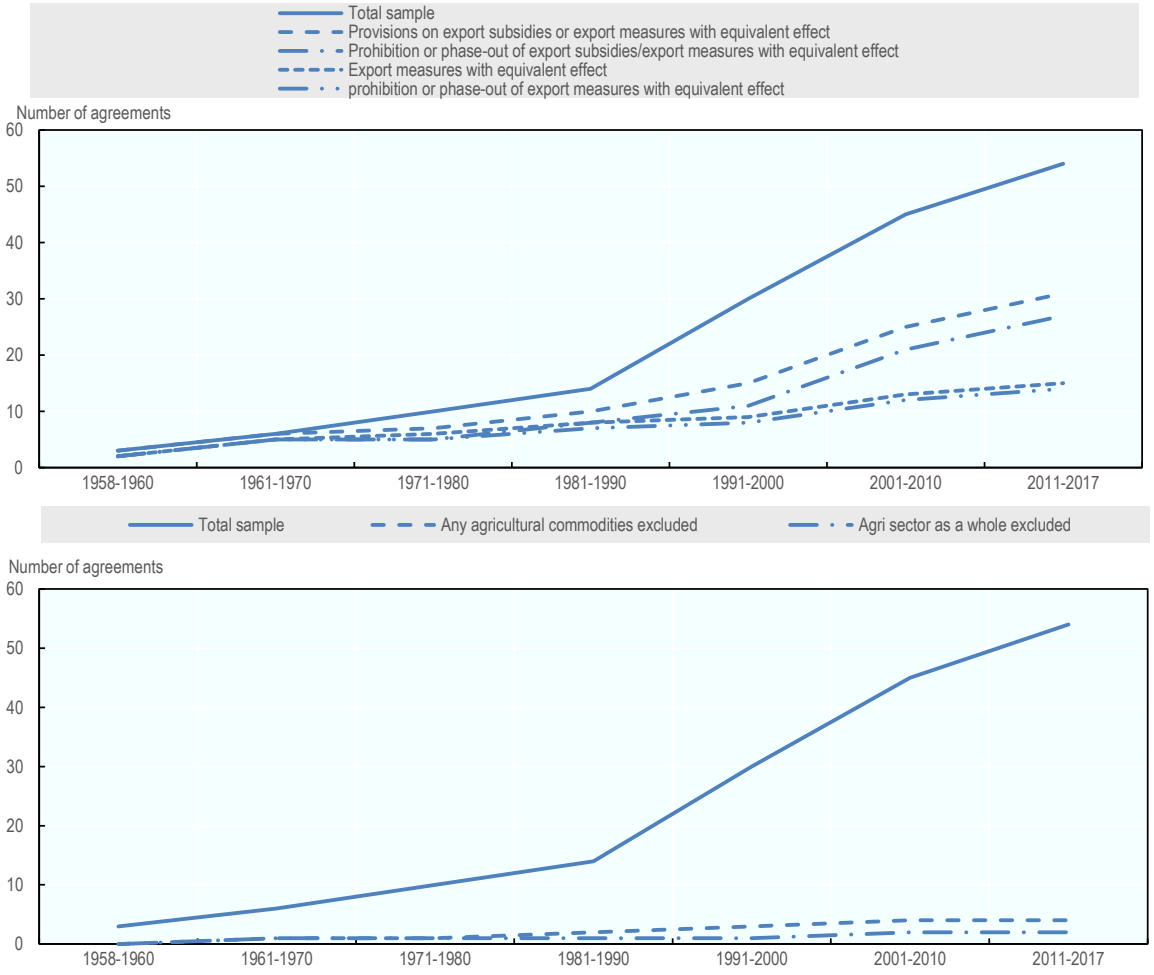
In addition to the above, the Decision contains disciplines to prevent the use of other export policies as subsidies. These disciplines include limitations on financing support for agricultural exporters, such as export credits, export credit guarantees or insurance programmes; rules for agricultural exporting state enterprises; and disciplines to ensure that international food aid does not adversely impact domestic markets.

Export subsidies create artificially-lower prices for subsidised commodities which can limit the development of agricultural production in a number of regions. While in the short term, consumers may benefit from lower prices, in the long term, the costs of missed opportunities for production in areas of relatively greater productivity imposes costs on these consumers. Importantly, it limits the potential for agricultural income growth, often

in the poorest regions of the world. Producing more in regions where costs are greater also means that globally the food system is higher cost than it otherwise would be (OECD, 2016). In the long term, they can also make global supplies more susceptible to regional production shocks, be they climate-based or market-based. The elimination of export subsidies, even if only between signatories to an agreement, therefore represents an important step towards trade liberalisation.

Of the agreements sampled for this study, half explicitly prohibit or phase out the use of export subsidies in general (Figure 14). The use of such provisions accelerated in the 2000s in particular, after the entry into force of the Agreement on Agriculture in 1995. A further 26% of agreements sampled ban or phase-out the use of export measures with equivalent effect.

Figure 14. Provisions on export subsidies



Note: Of the 54 agreements sampled.
Source: Author estimates.

Some agreements (such as Canada-Chile [1997]) contain specific deadlines by which export subsidies are to be eliminated. To ensure compliance, agreements often provide for countervailing measures (see countervailing measures section, below). In some cases, however, export subsidies themselves are permitted as a countervailing measure:

Australia-New Zealand (ANZCERTA) (1983), for example, permits the use of export subsidies in cases where one member state is able to obtain intermediate goods at lower prices than another member state, due to the provision of assistance by either party; while NAFTA (1994), focusing on agricultural export subsidies in particular, considers that these are only appropriate between members where they are used to counter subsidised imports from a non-NAFTA country. Two of the NAFTA signatories – the United States and Canada – are permitted to use agricultural export subsidies for specific products destined for the third signatory, Mexico, if Mexico's imports are subsidised exports from third countries. A very similar provision is included in CAFTA-DR (2006).

Agriculture is rarely exempt from prohibitions on export subsidies: only 7% of agreements sampled provide for the exclusion of any agricultural commodities from these disciplines, and only two agreements (the Caribbean Free Trade Association [CARIFTA, 1968] and the Caribbean Community and Common Market II [CARICOM II, 2001]) exclude the agricultural sector as a whole. Indeed, 30% of agreements sampled specifically prohibit or phase out agricultural export subsidies (equating to 52% of agreements sampled that prohibit or phase out export subsidies more generally), and of these, some (such as Peru-Singapore [2009] and Japan-India [2011]) do not contain provisions on export subsidies for *non*-agricultural commodities. Again, this attention to agricultural export subsidies may have previously been intended to compensate for the absence of a prohibition at multilateral level. The frequency of provisions banning or phasing out agricultural export subsidies has increased since 2005 in particular.

Export taxes and duties

Export duties, taxes or other charges are not prohibited under WTO rules and, unlike import duties or tariffs, they are not bound and can therefore be unilaterally adjusted. Nevertheless, they can be as detrimental to the functioning of markets as quantitative restrictions – a prohibitive export tax can be equivalent to an export *ban*, for example.

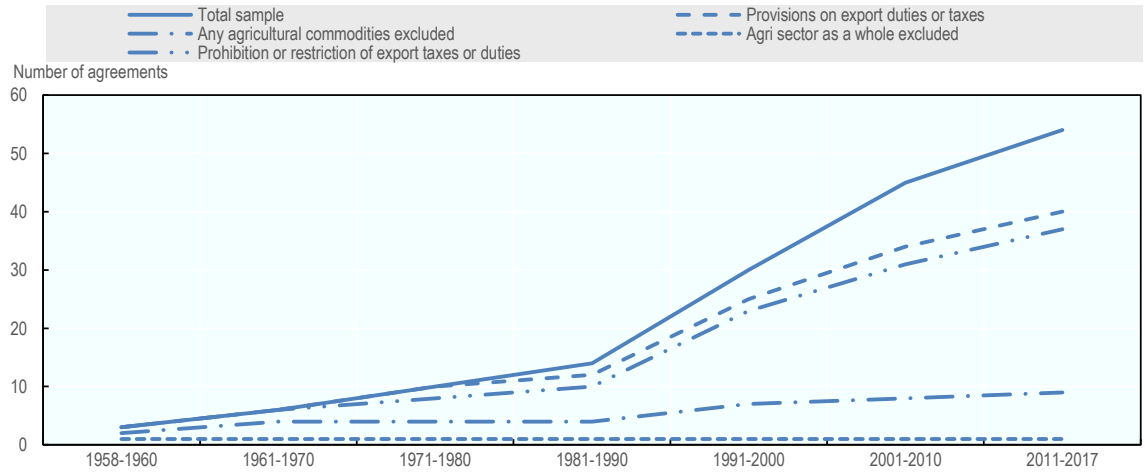
Notwithstanding (or perhaps due to) the absence of general WTO disciplines on export duties and taxes (and in contrast to the findings by Fulponi, Shearer and Almeida [2011], mentioned in Section 3), the majority (68%) of agreements sampled prohibit or restrict these (Figure 15). In a number of cases, these disciplines may reflect a condition of the accession of parties to the WTO, with certain new members being obliged to phase out export taxes or to limit them to a designated number of tariff lines with a bound rate.[35] Equally, parties, such as the European Union, which is a driver for WTO reform in this area, may be more likely to negotiate disciplines within trade agreements to compensate for the lack of multilateral rules. Interestingly, the number of agreements that prohibit or restrict export taxes or duties increases steadily until the 2000s, after the incidence in newer agreements fall.

In all but one case (EC-Turkey, [1996]), provisions are not specific to agriculture. Furthermore, the observed instances of exclusion of agriculture from disciplines on export duties and taxes are not that common. Only 17% of agreements sampled provide for the exclusion of agricultural commodities from the disciplining effect of the provisions, with agreements entering into force in the 1960s appearing most likely to exclude any

[35] Several new WTO members, including China, Mongolia, Saudi Arabia, Ukraine and Viet Nam, committed in their accession negotiations to eliminate at least some export taxes (ICTSD, 2008).

agricultural goods. Only one agreement, EFTA (1960), excludes the agricultural sector as a whole from these provisions.

Figure 15. Export duties and taxes provisions



Note: Of the 54 agreements sampled.
Source: Author estimates.

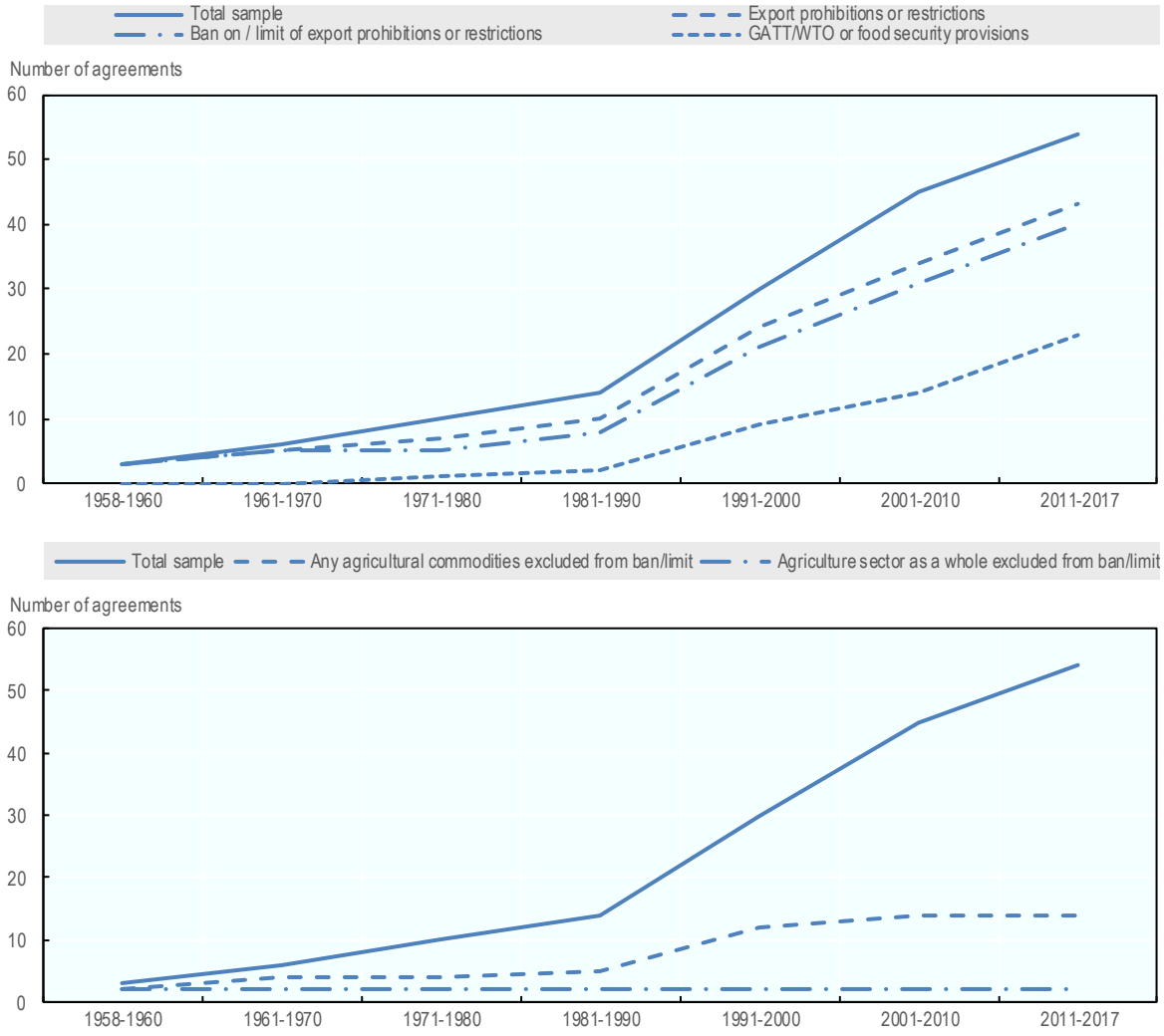
Export restrictions and prohibitions

The use of export restrictions can temporarily avoid price rises in net food-exporting countries and thus have been linked to domestic food security objectives. Export restrictions provide a non-budgetary method to influence food prices and thus food accessibility. However, these provisions have negative impacts on prices in importing countries, and thus offset food security impacts – indeed, policy measures such as these contributed to the food price crisis of 2007-08 and had a net negative impact on worldwide food security (Anderson, Ivanic and Martin, 2013). Export restrictions are also sometimes used with the stated objective of reducing price volatility in domestic markets (ICTSD, 2013), however, they often have the opposite effect, and *increase* volatility (OECD, 2017c). Other reasons include the protection of infant industries (by restricting exports of raw inputs), for example (ICTSD, 2013), but this instead creates efficiency losses in both importing and exporting countries (OECD, 2015). Further analysis of export subsidies in agriculture can be found in OECD (2013).

As with export taxes and duties, the majority (74%) of agreements examined ban or limit the use of general export restrictions or prohibitions (Figure 16). These generally take the form of attempts to ban the measures altogether, reflective of the potential harm to trading partners that export restrictions can have. A number (31%) of agreements make reference to multilateral rules, namely Article XI of the GATT, which prohibits quantitative restrictions, with some exceptions (Box 4). The number of agreements that ban or limit export restrictions or prohibitions has increased over the years, albeit with a slight slow down, relative to the sample, in the 2000-10 period.

Figure 16. Provisions on export prohibitions and restrictions

Number of provisions and exclusions in the sample of agreements



Note: Of the 54 agreements sampled.
Source: Author estimates.

Of those agreements that discipline export restrictions and prohibitions, only one specifically seeks to restrict the use of certain *agricultural* export restrictions, on food security grounds. Japan-Australia (2015) requires parties to endeavour not to introduce or maintain any export prohibitions or restrictions on any food which is "essential" to the other party, and requires advance notification of such measures. This importing country perspective reflects that of the WTO Agreement on Agriculture. Agreements such as COMESA (1994), Canada-Chile (1997), SADC (2000), EC-Mexico (2000) and CAFTA-DR (2006) meanwhile effectively reaffirm the GATT "safe harbour" clause, justifying the exclusion of agricultural commodities from disciplines on export restrictions and prohibitions in the event of a critical shortage of foodstuffs. Indeed, 28% of agreements sampled exclude at least some agricultural commodities from disciplines on export restrictions or prohibitions, although in the majority of cases, the reasons for this exclusion are not provided. In the 1990s, in the sample of agreements explored, there was an increase

in the exclusion of at least some agricultural commodities from these provisions, suggesting that the ability of these provisions to discipline agricultural export restrictions or prohibitions was more limited during this period.

Agreements that entered into force post-2006 do not exclude agricultural commodities from disciplines. This may be due in part to increasing international awareness of the role that agricultural export restrictions played in the food price spike of 2007/8. Exclusion of the sector as a whole is very rare, appearing in only one agreement (EFTA [1960]).

Box 4. Export prohibitions and restrictions and the WTO

Article XI of GATT 1994 bans export prohibitions and restrictions other than duties, taxes or other charges, for all trade in goods. An exception is granted for temporary export prohibitions or restrictions to prevent or relieve critical shortages of foodstuffs or other essential products (known as the "safe harbour" clause). Further exceptions are permitted, with conditions, under Article XX (i) for measures concerning exports of domestic raw materials for processing industries, and Article XX (j) for measures essential to the distribution of products in general or in local short supply.

Article 12 of the Agreement on Agriculture also requires that consideration be given to the effects of such prohibitions or restrictions on the food security of importing members, and provides for advance notification and consultations upon request, with exceptions for developing countries in some situations.

Sources: UNCTAD (2014); WTO (2018f).

Public support to agriculture and state trading

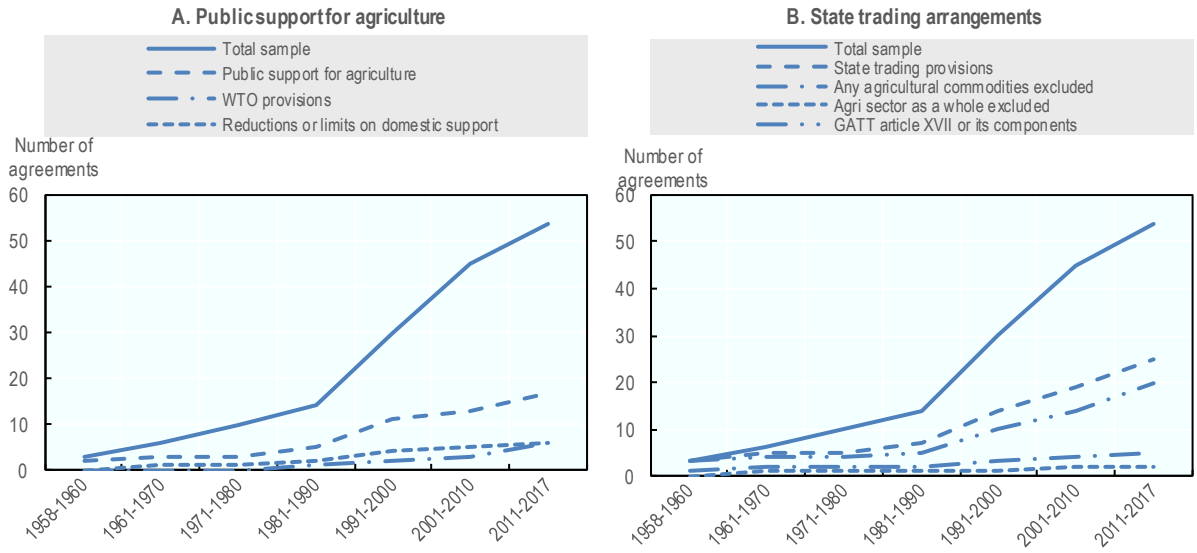
Public support to agriculture

The majority of agricultural support policies continue to be poorly aligned with government objectives for agricultural sectors – such as the improvement of farm competitiveness, environmental protection or food security. In most countries examined by the OECD (2018), there is a reliance on measures that distort production, a number of which are increasing (although many relate to market price support conferred by tariff protections). Progress in lowering support levels and shifting towards less-distorting measures remains partial, and is not shared across all countries.

Subsidies to specific industries are considered by the WTO to distort trade and competition. Nevertheless, given the particular and sensitive position of agriculture in many countries, the sector retained the right to domestic support under the WTO Agreement on Agriculture (AoA). This appears to be reflected in the substance of provisions in the sample that relate to government support for agricultural producers. While 31% of agreements contain these provisions (Figure 17), for most, they are not intended to limit the use of support by parties to the agreement, and therefore do not go beyond the WTO AoA. Those pre-dating the AoA, such as the EEC Treaty of Rome (1958), Common Market for Eastern and Southern Africa (COMESA [1994]), Economic Community of West African States (ECOWAS [1993]) and a number of other agreements allow signatories to use such policies, or look at harmonising policies across parties to the agreement. Where provisions exist to limit the use of producer support, they are based on best endeavours (e.g. NAFTA [1994]), common rules, or an agreement to take the matter forward in multilateral negotiations (e.g. the Canada-US Free Trade Agreement [CUSFTA, 1989] and the EU-Canada Comprehensive Economic and Trade Agreement [CETA, 2017]). Certain agreements (e.g. the Trans-Pacific Strategic Economic Partnership [2006], EFTA-Israel

[1993] and Canada-Chile [1997]) permit specific forms of support, such as price band systems or price compensation measures.

Figure 17. Public support to agriculture and state trading provisions



Note: Of the 54 agreements sampled.
Source: Author estimates.

In a small number of cases, however, the text of the agreements are explicit in terms of their restrictions. The Caribbean Community and Common Market (CARICOM) II (2001), for example, place limits on the amount of support to 10% of production or export amounts depending on the situation, with excess support subject to countervailing duties. The Eurasian Economic Union (2015) similarly prohibits measures which distort agricultural trade between members "to a large extent", namely agricultural export subsidies; permits, without limitations, non-distorting support such as general services, research and development and pest control; and limits the amount of all forms of support which do not fall into the above categories (which it classifies as "measures that distort agricultural trade") to 10% of the gross value of production of agricultural products.[36] Finally, one agreement (LAFTA [1961]) only permits support during a transition period – moreover, that support should not lead to an increase in "anti-economic production".[37]

There has been little change in trends in the inclusion of provisions on agricultural support since the 2000s – the same period where little change has also been observed in the multilateral arena. This – and the nature of the provisions – suggest that, based on the sample of agreements, bilateral and regional trade agreements are not providing a tool to address market-distorting forms of producer support. This is perhaps not too surprising, given the administrative difficulties in reducing domestic agricultural subsidies as a specific regional trade measure where countries export to numerous partners, each with specific programmes. Although countries may find it advantageous to reduce or eliminate subsidies unilaterally, it is difficult to manage for exports to only a selected set of countries. The inability of agreements to address public support for agriculture may account for the

[36] Annex 29.

[37] Article 28.

relatively high levels of countervailing measures observed in the sample (see Countervailing Measures section), as parties may increasingly rely on these to counteract the effect of subsidies.

State trading

State-owned trading enterprises (STEs), defined by the OECD as enterprises owned, sanctioned, or otherwise supported by the government that are authorised to engage in trade (OECD, 2001a), have a long history in agriculture. These have commonly taken the form of national or sub-national marketing boards (statutory, export or regulatory marketing boards) or other arrangements such as canalising agencies.[38] Statutory marketing boards are the most common type, and are mainly used for grains (often wheat) and dairy products. Their principal activities appear to be domestic price stabilisation and regulation, income support for producers and the control of trade (OECD, 2001b). In developing countries, the role of STEs extends into rural development and food security. As STEs may be granted a degree of market power, either in the sale and/or purchase of agricultural products, they have the ability to limit market access to domestic markets or distort competition in export markets (OECD, 2001b). While fewer countries rely on STEs to provide goods and services in general (not only agriculture) than before, due to privatisation and economic reform, Willemyns (2016) nevertheless suggests that those remaining STEs increasingly affect international trade.

Provisions relating to the use of STEs exist in less than half (46%) of the sampled agreements, and with reduced frequency relative to the number of agreements sampled over time (Figure 17B). This relative fall in the use of provisions in the area may be a function of the agreements explored – as mentioned above, many countries have taken steps to dismantle such arrangements – or may be representative of an area where bilateral and regional trade agreements have less influence. It is nevertheless surprising, given continued debate with regard to the application of WTO rules in this area (Rude and Annand, 2002; Smith, 2007). Further analysis is required to explore the reasoning behind this. Irrespective, very few agreements have excluded any agricultural commodities, suggesting a potentially wide reach of the provisions that are included. Indeed, in two cases (EEA [1994] and CETA [2017]), the agreements explicitly state that the rules also apply to state enterprises or monopolies for agricultural goods such as wine, and one agreement (ANZCERTA [1983]) provides for co-operation between the agricultural marketing authorities of member countries.

Of those agreements with provisions relating to STEs, some explicitly assert the right of parties to maintain or establish state enterprises, while others make no such explicit reference, but most set conditions. In total, 37% of agreements sampled refer either to GATT Article XVII – the principle article addressing STEs and their operations – or to certain requirements of the article, such as non-discrimination, or commercial considerations. Of these, the vast majority do not refer explicitly to GATT, but to its requirement that STEs not discriminate between nationals of the contracting parties. Only 9% of agreements make explicit reference to GATT or the WTO.

[38] The legal definition of a state trading enterprise (STE), including the WTO definition, is subject to debate. For the purposes of this study, only explicit references to pre-defined wording were coded as provisions relating to STEs (see Annex A for details).

Sanitary and phytosanitary measures (SPS) and technical barriers to trade (TBT)

Agricultural trade is influenced by the sanitary and phytosanitary (SPS) requirements and technical barriers to trade (TBT). Recent work by the OECD has highlighted how these measures can be trade-creating and at the same time can increase prices, or trade costs more generally (Cadot, Gourdon and van Tongeren, 2018). Indeed, the importance of SPS and TBT measures – and their potential to perhaps be misused for protectionist purposes – has increased in line with tariff reduction commitments under the WTO (Stoler, 2011; European Parliament, 2014). In the majority of cases, the primary intent of government-imposed measures is not to discriminate but rather to enhance welfare by addressing information asymmetries regarding product quality and protecting human health and safety as well as animal and plant life. Nevertheless, the impact of the imposition of the same standard on domestic and foreign firms may still be asymmetric due to differences in compliance costs. Indeed, beyond the immediate costs faced by companies in confirming compliance through testing, certification or inspection by laboratories or certification bodies, and in repatriating rejected goods, information needs also impose costs, including the costs of evaluating the technical impact of foreign regulations, and translating and disseminating product information, among others. Foreign exporters may also be subject to higher adjustment costs than domestic firms when confronted with new regulations (Stoler, 2011).

An even more important factor than differential impact, however, is the broader complexity of overlapping and perhaps conflicting regulations. If, for example, a company is obliged to adjust its production facilities to comply with diverse technical requirements in different markets, per unit production costs are likely to increase, impacting smaller businesses the most. Countries therefore often use trade agreements to narrow differences between regulatory regimes as a step towards capturing the benefits created by these measures while at the same time reducing the trade costs involved in complying with them.

Bilateral and regional trade agreements can also be used to move regulatory frameworks towards harmonisation, transparency, equivalence and risk analysis-based measures provided under WTO agreements, thus facilitating trade flows not only among signatories to an agreement but also among non-members (OECD, 2015). This can in turn enable wider applicability of standard regulatory regimes and pave the way for their future multilateralisation.

Finally, it should be noted that although, as previously mentioned, the enforceability of provisions are not explored within this study, recent OECD analysis has found that the degree of enforceability of SPS and TBT provisions is a crucial determinant for any positive trade effects in RTAs (OECD, 2018a).

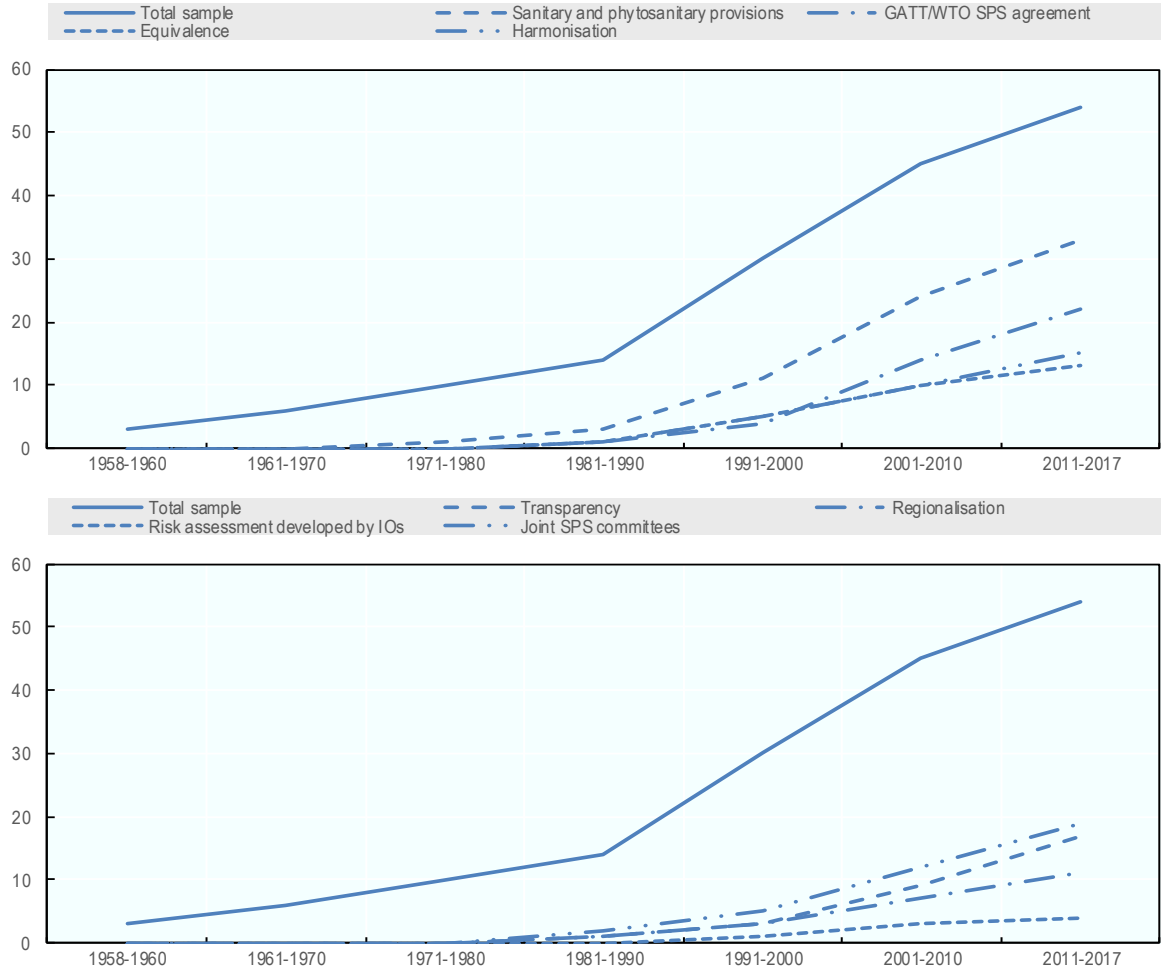
Sanitary and phytosanitary (SPS) provisions

In the sample of agreements explored, the inclusion of SPS provisions is a more recent development compared with many of the other provision areas. While these provisions first appear in the early 1980s, their occurrence in the 1980s and 1990s is sporadic. Nevertheless, an acceleration in the inclusion of SPS provisions in the mid-2000s onwards is observed, with all sampled agreements that entered into force in or after 2004 containing provisions related to SPS matters (Figure 18). As a result, a total of 61% of the sample include SPS provisions. This relatively recent surge, no doubt facilitated by the entry into force of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) in 1995, may also be due to decreases over time in the adjustment costs of

participation in the SPS provisions of new or expanded PTAs, as competent authorities accumulate experience in the implementation of SPS provisions in agreements.

Figure 18. Sanitary and phytosanitary provisions

Number of provisions in the sample of agreements



Note: Of the 54 agreements explored. IOs: International organisations.
Source: Author estimates.

The content and scope of SPS provisions has also evolved with time: while provisions in agreements entering into force in the 1980s and early 1990s (e.g. EFTA-Spain [1980] and EFTA-Israel [1993]) largely focus on ensuring non-discrimination of such measures, later agreements (particularly those entering into force in 2005 onwards) frequently include dedicated SPS chapters and occasionally annexes with multiple commitments. The primacy of the WTO is also evident, with many agreements referencing GATT and WTO agreements, a trend that slowly begins in the years following the entry into force of the WTO SPS Agreement but which gathers momentum in the late 2000s. Provisions in sampled agreements that enter into force after the SPS Agreement increasingly tend to affirm the rights and obligations of the parties under the WTO Agreement, with almost all agreements from 2005 onwards doing so. The explicit confirmation of the WTO commitments also increases the flexibility of the parties to address disagreements with

respect to SPS, enabling the settling of disputes either according to the dispute procedures of the specific agreement or according to WTO dispute settlement procedures (Rudloff and Simons, 2004). Interestingly, the preambles to the SPS chapters in some of the sampled PTAs also state that the objectives of the agreement are to improve the implementation of the SPS Agreement, suggesting that these intend to operationalise WTO rules, rather than to create an additional set of overlapping requirements.

The steps taken to help narrow differences across SPS systems – or to reduce the costs of operating and complying with the SPS arrangements of agreement partners – are an increasingly common feature of PTAs. These differ across the agreements sampled, reflecting the core principles of the SPS Agreement – harmonisation, equivalence, risk assessment, regionalisation and transparency (Box 5). Provisions that require greater transparency around measures are common, but so too are measures that seek to bring the SPS systems in each member country closer – harmonisation and equivalence. While the explicit reference to these principles – as opposed to a general reference to the SPS Agreement – is noteworthy, the extent to which these achieve outcomes cannot be judged on the presence of provisions alone. Rather, they depict areas where countries have expressed intent to address these aspects in the context of the agreement.

Box 5. Core principles of the WTO SPS Agreement

Harmonisation: In order to harmonise sanitary and phytosanitary measures as much as possible, WTO Members shall base their national measures on international standards, where these exist. There are exceptions to this rule, however: Members are allowed to introduce or maintain measures that are more stringent than those based on international standards provided that there is scientific evidence, for example.

Equivalence: WTO Members shall accept the SPS measures of others as equivalent, even if these measures differ from their own, provided that the measures achieve the importing Member's "appropriate level" of SPS protection.

Assessment of Risk: Members shall ensure that their SPS measures are based on an assessment of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organisations. When assessing risks, Members shall take available scientific evidence into account.

Regionalisation: Members shall ensure that their SPS measures are adapted to the sanitary or phyto-sanitary characteristics of the area from which the product originated and to which the product is destined. Countries shall also recognise pest- or disease-free areas and areas of low pest or disease prevalence. Exporters shall provide evidence that areas within their territories are pest- or disease-free areas or areas of low pest or disease prevalence.

Transparency: All WTO Members are required to establish national enquiry points and to notify other Members of the creation or amendment of any SPS regulation prior to its adoption. In addition, except in urgent circumstances, Members shall allow a "reasonable interval" between the publication of the regulation and its entry into force in order to allow time for other Members to adapt to the new requirements.

Source: WTO (2010).

Harmonisation

Harmonisation is an effective means to reduce the costs of compliance with differing sets of standards. Harmonisation can facilitate equivalence and stimulate trade, particularly if mutual recognition is also achieved. In some cases, differences in climatic, geographic or technological factors across countries will hinder harmonisation to some degree. Nevertheless, harmonisation on the basis of *international* standards is particularly

important to avoid raising external barriers against third countries and thus eroding some of the benefits of multilateral liberalisation.

Forty-five per cent of sampled agreements with SPS provisions contain provisions that address the harmonisation of standards, to varying degrees, but with increasing frequency since 2006. Of these, the increasing majority indicate that efforts should be made to ensure that this harmonisation is based on international standards. In a minority of cases (including COMESA [1994] and EU-Central America [2013]), the agreement explicitly provides for harmonisation between parties to the agreement, with no requirement to take international standards into account. In other cases (e.g. Chile-China [2006]), harmonisation may rely either on international standards or risk assessment.

Equivalence and mutual recognition

Equivalence, in other words the recognition by one party of the other party's SPS measures as acceptable even if they differ from their own, is referred to in 39% of sampled agreements with SPS provisions. These provisions have not kept pace with the number of sampled agreements in recent decades. References to equivalence also take a wide variety of forms, not all of which are legally binding, with some agreements (such as Peru-Singapore [2009]) simply recognising the benefits of equivalence, and others (such as EC-Mexico [2000] and EU-Central America [2013]) providing for committees that will develop provisions on equivalence or otherwise strengthen co-operation in this area, while a small number (including NAFTA [1994], Australia-China [2015] and CETA [2017]) explicitly commit parties to accepting the other party's SPS measures as equivalent under certain conditions. Explicit provisions on mutual recognition are rare: only one agreement (Mercosur-India [2009]) in the sample provides for co-operation on the mutual recognition of SPS measures more broadly, while three others (ASEAN Free Trade Area [1993], COMESA [1994] and EU-Central America [2013]) provide for mutual recognition in specific areas such as tests, certification and laboratory accreditation schemes. This may be due to the difficulties involved in negotiating mutual recognition of the entire SPS system, especially between parties at different stages of development (OECD, 2015).

Risk assessment

Of the core SPS areas, risk assessment features the least within the agreements sampled. Very few agreements contain specific SPS provisions on risk assessment, and their occurrence has decreased relative to the rise in the number of agreements sampled. This may be due to differences in approach among some WTO Members, with some (such as the European Union) spurred by the experience of regulatory failure in the 1980s and 1990s to require the use of the precautionary principle, and others (such as the United States) specifying decision-making based on scientifically-sound analysis. Those agreements that do provide for risk assessment tend to reiterate the requirement within the WTO SPS Agreement that risk assessments take into account techniques developed by international organisations.

Regionalisation

By circumscribing disease-free zones within countries which may be experiencing outbreaks in other areas, the use of regionalisation enables the flow of agricultural and livestock products even in the event of disease outbreaks, and therefore can be a powerful tool to facilitate trade liberalisation. In essence, regionalisation allows the flexible implementation of SPS measures while guaranteeing a degree of protection to importing countries. Roughly a third of sampled agreements with SPS provisions contain regionalisation measures. Very few cases of such provisions were found prior to 2006 and,

while the frequency of regionalisation provisions in sampled agreements has increased since, there has been a relative decline in their inclusion compared with the increase in the number of agreements.

Transparency

The transparency of SPS measures is a key component of trade liberalisation. Transparency reduces costs associated with accessing information on the regulations of other countries, and makes it more difficult for countries to introduce discriminatory regulations. Of the five core SPS principles, transparency was the second-most likely to be included within the agreements sampled. 51% of agreements with SPS provisions contain explicit transparency requirements – including requirements for the notification of regulatory changes or the creation of enquiry points – which are key to ensuring market access of agricultural and food products. The reason for the relatively high rate of inclusion of transparency provisions may be the fact that all parties stand to benefit from these – including those that go further than WTO requirements, such as the specification of notification periods. Examples of mutually-beneficial provisions include transparency requirements with respect to significant changes related to disease and pest status, emergency situations, etc. Countries that are signatories to multiple agreements have even greater interest in being notified of changes in SPS regulations or the introduction of new measures. Although the first transparency provision appears in the late 1980s, significant increases are observed from 2006 onwards.

SPS Committees

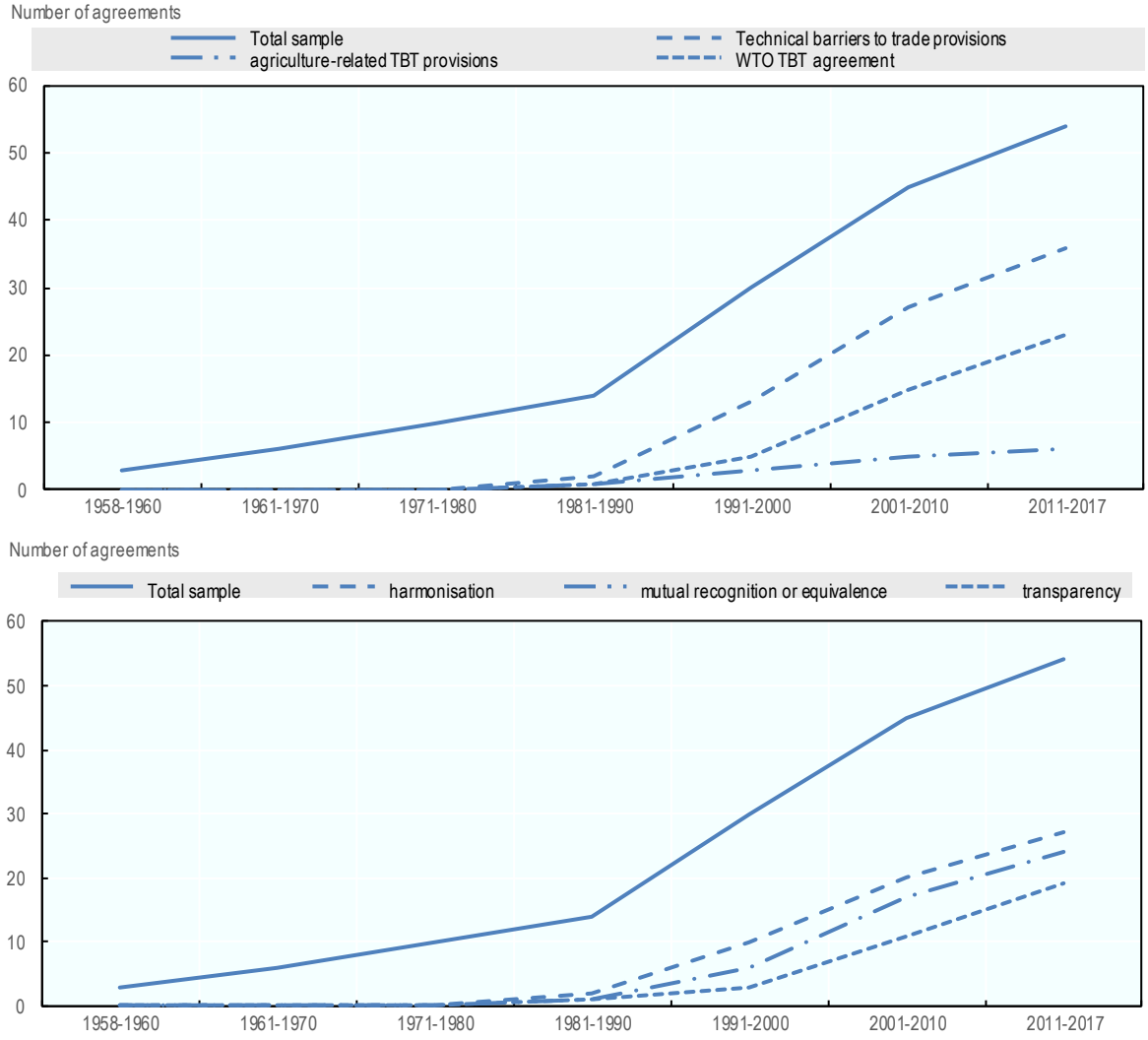
Joint SPS committees provide a framework for the bilateral resolution of contentious issues as well as the consultation of relevant international organisations on pending domestic SPS measures, the co-ordination of technical co-operation programmes and the implementation of SPS provisions. The creation of a joint SPS committee is the most commonly-found SPS provision within the agreements sampled, featuring in 58% of agreements with SPS commitments. While relatively low uptake in agreements entering into force prior to 2005 is observed, almost all agreements that entered into force after this date contain such provisions.

Provisions relating to technical barriers to trade (TBT)

For the most part, the degree of inclusion and characteristics of TBT provisions in the sampled agreements is similar to those for SPS measures (Figure 19). 67% of the sample contain TBT provisions, while 39% of the total sample (or 64% of all sampled agreements that contain TBT provisions) reaffirm rights and obligations under either the WTO Agreement on Technical Barriers to Trade (the TBT Agreement) or its GATT predecessor, showing the relative importance of the multilateral framework for these measures to underpin the agreement provisions. While two recent agreements (EU-Central America [2013] and CETA [2017]) do not reaffirm their general rights and obligations, both incorporate a number of key provisions of the TBT Agreement.

The trends in the inclusion of TBT measures are also not dissimilar to those observed for SPS, with provisions only first appearing in the mid-1980s and accelerating in the 2000s in particular. TBT provisions have since become a standard feature of the agreements sampled (every agreement from 2003 onwards contained TBT provisions). Trends in the affirmation of the TBT Agreement also follow a similar pattern to affirmations of the SPS Agreement, slowly beginning after the entry into force of the Agreement in 1995, and accelerating from the mid-2000s onwards.

Figure 19. Provisions relating to technical barriers to trade (TBT)



Note: Of the 54 agreements sampled.
Source: Author estimates.

Of the agreements sampled, none have explicitly excluded agriculture from their TBT provisions (beyond the instances where the agreement overall excludes the sector or agricultural products), and only six (CUSFTA [1989], NAFTA [1994], EEA [1994], CARICOM II [2001], SACU [2004] and the EAEU [2015]) have agriculture-specific provisions. These include commitments to harmonise – or to at least work towards the harmonisation of – technical regulatory requirements and in some cases inspection procedures for agriculture and food, or specific agricultural products, in most cases taking appropriate international standards into account (e.g. CUSFTA; CARICOM II; SACU and EAEU); reinforced commitment to respect the principle of national treatment when applying agricultural grading and marketing standards to products (e.g. NAFTA), and protocols for the abolition of technical barriers to trade in specific products such as wine (e.g. EEA).

The WTO TBT Agreement shares a number of core principles with the SPS Agreement, including harmonisation, equivalence and transparency. The TBT Agreement recognises, for example, the importance of harmonisation for the removal of technical barriers to trade. In addition, it encourages mutual recognition of the results of conformity assessment procedures, which define the testing procedures necessary to assess the conformity of products to the norms. WTO Members are also encouraged to accept technical regulations of other Members as equivalent (unilateral recognition), even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfil the objectives of their own regulations.

Of the provisions that seek to reduce the trade costs associated with TBT arrangements, the most commonly-applied provisions found in the sampled agreements are attempts to bring partner country systems closer either through harmonisation, or through mutual recognition or equivalence of standards, technical regulations or conformity assessments of other parties to the agreement. Recognition of *product standards*, for example, can be unilateral (equivalence) or reciprocal (mutual recognition). Both are commonly considered to contribute to trade liberalisation, as they enable firms to select any one standard for the sale of a product to a regional market. The mutual recognition of *conformity assessment tests* is another way to at least partially remove technical barriers to trade. While this requires neither recognition nor harmonisation of product standards, it does however require some degree of trust between countries and confidence in the quality of their testing methods. Nevertheless, the mutual recognition of conformity assessments has been found to have a positive effect on the trade of parties to trade agreements more generally, eliminating the need for duplicative tests at export destinations (Piermartini and Budetta, 2009).

Countries may require a degree of harmonisation of product standards (harmonisation can be full or limited to specific requirements) in cases where differences in standards, at least, are too great to allow mutual recognition. Indeed, it has been argued that the advantage of harmonisation relative to mutual recognition in terms of trade effects is that by reducing differences between products produced in different countries, harmonisation increases consumer confidence in the products and thus trade (Piermartini and Budetta, 2009). Conversely, however, full harmonisation can also *reduce* trade by reducing the degree of product differentiation. Harmonisation commitments feature in 72% of sampled agreements with TBT provisions, while mutual recognition/equivalence commitments each feature in 67% of sampled agreements with TBT provisions. Harmonisation measures are first observed in the mid-1980s, with the Australia-New Zealand Agreement (ANZCERTA [1983]), and gradually increase in frequency over time, with the majority of agreements entering into force in the mid-2000s onwards containing these provisions. Not all provisions require or encourage harmonisation to be based on international standards: ANZCERTA, CUSFTA (1989) and SADC (2000) are some examples of where there is no such provision.

Mutual recognition or equivalence provisions, meanwhile, first appear at the end of the 1980s (CUSFTA), and their inclusion in agreements accelerates from the 1990s onwards. A variety of mutual recognition and equivalence provisions are observed: a number of agreements (including EEA [1994], NAFTA [1994], COMESA [1994], Canada-Israel [1997] and CARICOM II [2001]) provide for the mutual recognition of conformity assessments, while others (e.g. SADC [2000], Trans-Pacific Strategic Economic Partnership [2006], and Peru-Singapore [2009]) provide for the equivalence of technical regulations. Some (e.g. Chile-China [2006]) provide for both equivalence of technical regulations and mutual recognition of conformity assessments.

The transparency of technical regulations is just as important for trade liberalisation as transparency of SPS measures. In cases where countries' optimal standards are too different to allow either mutual recognition or harmonisation, transparency can enable governments to minimise the trade-reducing effects of differing standards. Like SPS transparency measures, transparency provisions for TBTs in the sample are relatively common: 53% of sampled agreements with TBT provisions contain these. Transparency provisions are first observed in agreements entering into force in the late 1980s, but do not accelerate until the 2000s onwards. Provisions range from general commitments to share information (e.g. EC-Mexico [2000] and CARICOM II [2001]), to the establishment of enquiry points, the notification of draft technical regulations, and publication requirements. In some cases (e.g. NAFTA [1994]; US-Australia [2005]; Trans-Pacific Strategic Economic Partnership [2006]; Central European Free Trade Agreement (CEFTA) 2006 [2007]; EU-Central America [2013] and CETA [2017]), agreements go further than WTO provisions, by establishing specific timelines for the notification of draft regulations.

Remedies and safeguards for agro-food products

While it could be expected that agreements tend to abolish the use of trade remedies against members, the elimination of intra-regional tariffs can in fact increase demand for the protective effects of trade remedies (Kruger, Denner and Cronje, 2009; Viljoen, 2016; Teh, Prusa and Budetta, 2009). In particular, safeguards cushion the liberalising effects of an agreement by setting out conditions – mainly injury to domestic producers – under which the liberalising provisions of the agreement may be temporarily suspended or partially reversed.

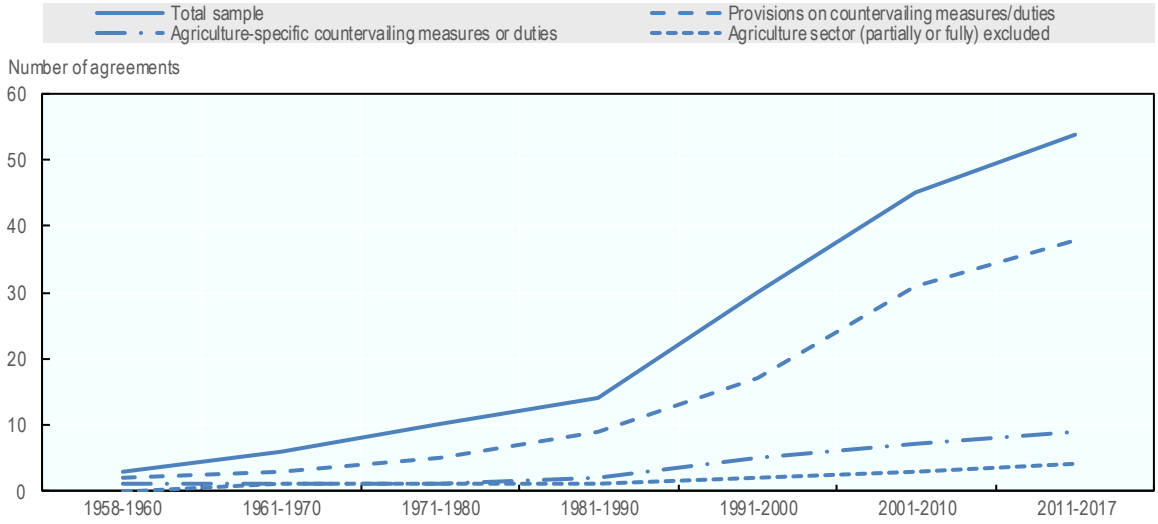
It could therefore be argued that trade remedies can provide a means to deflate political pressure for protectionism by means of temporary reversals of liberalisation, thus enabling deeper liberalisation and long-term net welfare gains amongst member countries. Previous studies have found that those agreements that have abolished trade remedy instruments (particularly in cases where both anti-dumping and countervailing measures have been abolished) are associated with greater intra-regional trade (both in value and share), and are more likely to achieve deeper integration (Teh, Prusa and Budetta, 2009). Yet, as noted below, restrictions on the use of trade remedies between members may also result in the greater use of global remedies and therefore the penalisation of non-members.

Countervailing measures

Countervailing measures – measures used by countries to counter the effects of subsidised imports – are provided for in a relatively large and increasing number (70%) of agreements sampled (Figure 20). These measures can include the suspension of tariff elimination and/or additional tariffs, or – as already seen in the case of NAFTA (1994) and CAFTA-DR (2006), for example – the use of export subsidies (see Export Subsidies section). In roughly half of the agreements sampled, reference is made to international provisions, such as the WTO Agreement on Subsidies and Countervailing measures (SCM Agreement), which permits countervailing duties to be levied on imports which benefit from subsidies if they cause or threaten material injury to an established domestic industry, or are such as to retard materially the establishment of a domestic industry.

Figure 20. Countervailing provisions

Number of provisions and exclusions in the sample of agreements



Note: Of the 54 agreements sampled.
Source: Author estimates.

Only three of the agreements sampled (ANZCERTA [1983], EEA [1994] and Eurasian Economic Union [EAEU, 2015]) generally abolish countervailing duties, and even these allow broad exceptions (for example, by stating "except in accordance with GATT/WTO rules"). This may be due to the lack of common policies on subsidies and state aid in agreements. Without such rules, and given the global nature of subsidy distortions, there appears to be little motivation for PTAs to restrict the application of countervailing duties against members.

It is true, however, that in a small number of the agreements sampled, more stringent rules apply to countervailing duties between members than those imposed on third countries. While the intent is to curb the use of these measures in intra-bloc trade, it has been argued that this can lead to more discrimination against non-members through more frequent countervailing duty actions (Teh, Prusa and Budetta, 2009). In ANZCERTA, the EEA and the EAEU, for example, countervailing duties between parties are prohibited, with exceptions, yet countervailing actions against third countries are not. ANZCERTA also sets strict conditions for the use of countervailing duties against members, with respect to the reasons for the duties, the proof of injury, their amount and duration, while permitting countervailing actions against third countries, to address cases where subsidised imports in one Member State from a third country are causing or threatening material injury in the other Member State. In other cases (e.g. COMESA [1994]), countervailing duties are permitted against members and non-members alike, but for duties against members, there is the extra requirement that there must be material injury or the threat of such. Another way in which PTAs can reduce countervailing actions between members is through the establishment of a regional body to review countervailing duty determinations. This is the case in NAFTA (1994) and CUSFTA (1989), for example.

In a relatively small number of cases (16% of agreements sampled, including the EEC Treaty [1958], NAFTA [1994], Canada-Chile [1997], US-Australia [2005], CAFTA-DR [2006] and the EAEU [2015]), agreements allow agriculture-specific countervailing measures, mainly in retaliation for agricultural export subsidies (the EAEU also permits

countervailing measures to be applied in retaliation to agricultural subsidies more broadly). In two of these agreements (NAFTA and CAFTA-DR), as mentioned earlier (see Export Subsidies section), countervailing measures can also be applied to partners that import agricultural goods subsidised by a third party. Overall, however, relative to the number of agreements sampled, there is a declining trend in the number of agreements featuring countervailing measures specific to agriculture.

There are also few occurrences of exclusions of agricultural commodities from countervailing measures (even if "partial" exclusions of certain commodities are taken into account), beyond exclusions from the agreement as a whole, implying a reticence to treat agriculture differently.

Anti-dumping

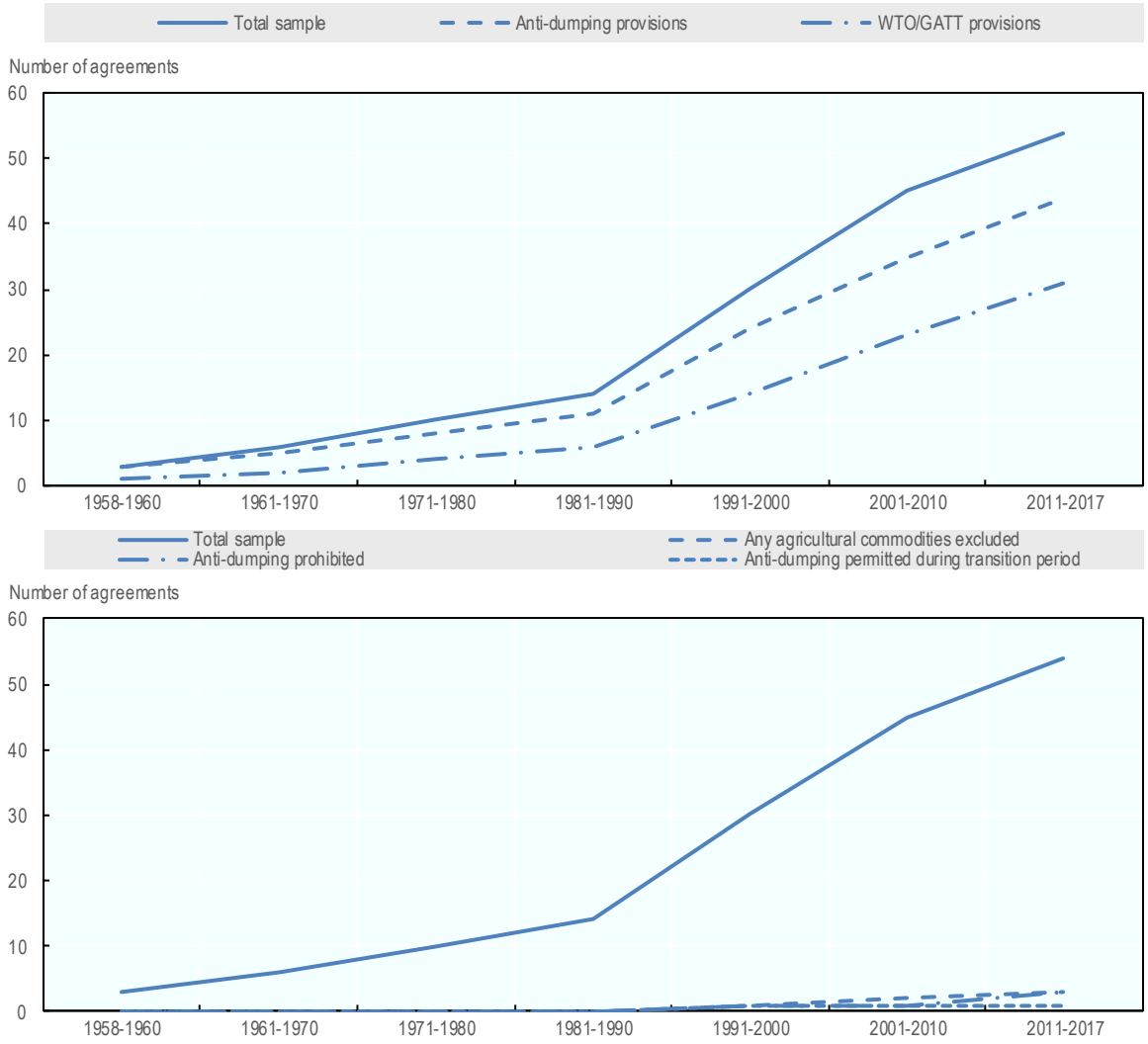
Anti-dumping measures – meaning measures which, broadly defined, aim to counteract the sale of imports at prices below the cost of production – are similar in form and in terms of procedural requirements to countervailing measures, the main difference being that anti-dumping measures apply to "dumped", rather than subsidised, imports. There is evidence that efforts to liberalise trade in recent decades have resulted in greater reliance on anti-dumping – studies have found, for example, that tariff reductions in the manufacturing sector have led to increases in anti-dumping duties, as countries seek alternative means to protect their industries (Malhotra and Kassam, 2006).

Anti-dumping has been found to have mixed effects on trade – although aimed at providing mechanisms to limit unfair trade practices or predatory behaviour, trade may be deterred (Fulponi, Shearer and Almeida, 2011). The fear of anti-dumping measures can even discourage prospective exporters with a comparative advantage in exports. Anti-dumping measures have been used less frequently in agriculture than in other sectors – nevertheless, previous studies have found that it can create an environment that discourages competition in the sector, reduces consumer welfare (Baylis and Malhotra, 2008) and restricts agricultural imports (Malhotra and Kassam, 2006).

Anti-dumping provisions feature in the vast majority (81%) of agreements sampled, and with increasing frequency (Figure 21). Anti-dumping measures are very seldom prohibited with immediate effect. Exceptions include rules that give favourable treatment to PTA partners, such as the prohibition of their use against members, with no reference to third countries (e.g. EFTA-Ukraine [2012]), and the prohibition of their use against members but explicitly not third countries (e.g. EEA [1994] and the EAEU [2015]). In the case of the EEA, the elimination of anti-dumping has most likely been a necessary step towards achieving a single market (Teh, Prusa and Budetta, 2009). In one of the agreements sampled (Canada-Chile [1997]), anti-dumping actions between members are prohibited after a phase-out period. Certain agreements also apply restrictions to varying degrees to anti-dumping measures between members. These include the requirements that anti-dumping actions must first be authorised by a regional review body (e.g. the Central American Common Market [CACM, 1961] and EC-Egypt [1973]); that members enter into consultations with each other prior to applying anti-dumping measures (e.g. the Pacific Island Countries Trade Agreement [PICTA] (2003]); or that a clear causal link is established between the dumping and injury to industry (e.g. EU-Central America [2013]). In some cases (e.g. CETA [2017]), provision is made for the possible imposition of a lesser duty against members than the full margin of dumping. Finally, some agreements, such as ANZCERTA, apply strict conditions to the levying of anti-dumping duties on members, while making no such stipulations for non-members.

Figure 21. Anti-dumping provisions

Number of provisions and exclusions in the sample of agreements



Note: Of the 54 agreements sampled.
Source: Author estimates.

More than half of the agreements (57%) make reference to the WTO/GATT provisions or "international obligations" regarding anti-dumping, indicating – as is the case with SPS and TBT provisions – that there is a multilateral underpinning to the bilateral and regional trade agreements negotiated. These references tend to require that anti-dumping actions must be consistent with international obligations. This trend has gradually increased over time, with almost all agreements entering into force from the late-2000s onwards containing references to international rules.

A very small number of agreements sampled single out the agricultural sector for particular attention, either specifically prohibiting dumping in the agricultural sector, or making reference to agriculture-specific anti-dumping measures. These include CUSFTA (1989), which explicitly prohibits dumping of agricultural goods, CARICOM II (2001), which establishes a "regime" to protect members from the dumping of agricultural products, and

ANZCERTA (1983), which permits action between members in response to dumping in the dairy sector. Similar to countervailing duties, very few exclusions of agricultural goods from the anti-dumping provisions were observed in the sample beyond exclusions from the agreement as a whole. No cases of exclusion of the agricultural sector as a whole were observed.

Safeguards

Safeguard provisions are often included in regional trade agreements as a means to secure the necessary political support for the successful implementation of the agreement, and to reassure import-competing sectors in member states that they can avail of protection against the unanticipated consequences of liberalisation (Kruger, Denner and Cronje, 2009; Teh, Prusa and Budetta, 2009). Bilateral (or regional) safeguards enable PTA members to either suspend liberalisation or reintroduce tariffs up to the MFN tariff or the MFN tariff that existed at the time that preferential liberalisation began.

Of the three main forms of trade remedies analysed – countervailing, anti-dumping and safeguard measures – there would appear to be a clear preference of agreements in the sample to include safeguards. All but one of the agreements sampled – GUAM (2003), between Azerbaijan, Georgia, Moldova and the Ukraine – provide for safeguards in some form, be they general (meaning non-specific) regional (transitional or longer-term), general bilateral, balance of payments or special safeguards for the agricultural or textile sectors. The inclusion of safeguards, broadly defined, has substantially increased over time, largely keeping pace with the number of agreements sampled, and most likely reflecting the increasing inclusion of trade liberalising provisions in trade agreements (Figure 22).

The majority of safeguards provided for in the sample are general regional or bilateral (transitional or longer-term). The trigger mechanism for the invocation of a bilateral or regional safeguard is more vaguely worded in some of the agreements than the language in GATT Article XIX and the WTO Safeguards Agreement, suggesting that it may be easier to invoke a general bilateral safeguard. Nevertheless, restrictions on bilateral safeguards can be found: in some cases (e.g. US-Australia [2005]; ANZCERTA [1983]), safeguards can only be applied during the transition period, a restriction that will ultimately limit the impact of safeguards on intra-regional trade. Some also require parties to consult each other before applying safeguards. In addition, the inclusion of provisions on compensation and retaliation in a number of agreements (e.g. CUSFTA [1989]; NAFTA [1994]; Canada-Israel [1997], Canada-Chile [1997] and EC-Mexico [2000]) can provide greater deterrence to the use of bilateral safeguard actions, again reducing their impact on trade between parties. However, beyond exclusions from the agreements as a whole, only five of the agreements sampled exclude certain agricultural products from general bilateral or regional safeguard provisions, and only one (EFTA [1960]) effectively excludes the agricultural sector as a whole, reflecting the sensitivity of the sector.[39]

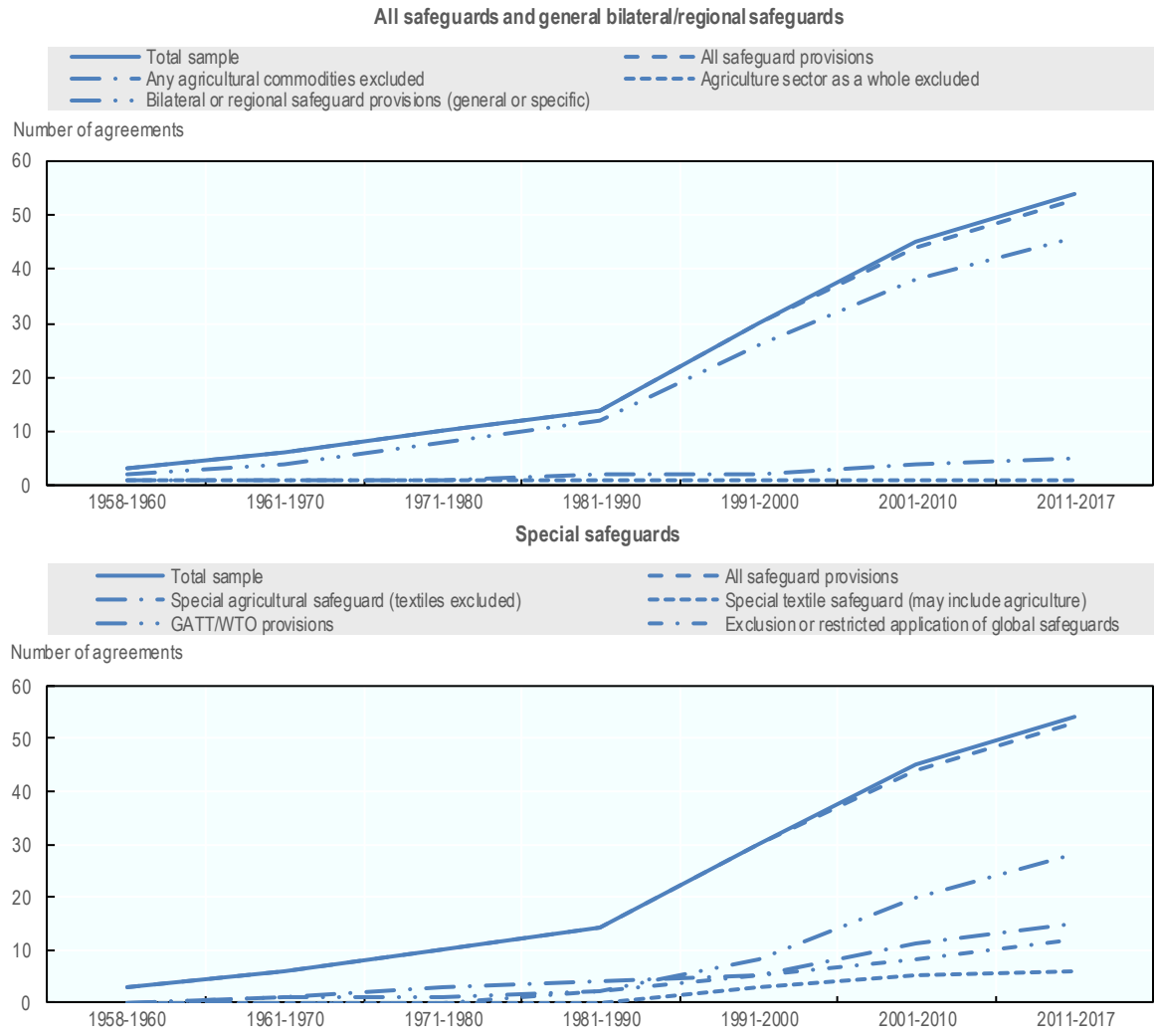
A considerable degree of heterogeneity is observed across the safeguard provisions of sampled agreements, indicating that these are carefully negotiated and tailored to the specific requirements of the parties concerned. The apparent effort invested in the design of safeguard measures appears to be at odds with the frequency of their use, however:

[39] EFTA (1960) excludes an extensive list of almost all agricultural goods from safeguard provisions. This is coded as the exclusion of the sector as a whole.

previous analysis has indicated that bilateral and regional safeguard provisions are in fact rarely used (Crawford, McKeagg and Tolstova, 2013).

More than half (52%) of the agreements sampled refer to GATT/WTO provisions or "international obligations". Of the agreements sampled, almost all entering into force in or after 2005 refer to these. Of these, the majority reaffirm obligations under the GATT Article XIX and the WTO Agreement on Safeguards. In a very small number of cases, however, specific elements of the WTO Agreement on Safeguards are explicitly incorporated into trade agreements, the agreement between Switzerland and China (2014) being one example.[40]

Figure 22. Safeguard provisions



Note: Of the 54 agreements sampled.
Source: Author estimates.

[40] Articles 5.4 and 5.6 of the Switzerland-China agreement state that Articles 3 and 4, respectively, of the Agreement on Safeguards are incorporated into and made part of the agreement.

Notwithstanding frequent references to rights and obligations under the multilateral agreements, 22% of the PTAs sampled provide either for the exclusion (optional or obligatory) of partners from global safeguard actions, or for the restricted application of global safeguards to partners, under certain conditions. This poses a potential conflict between regional rules and the non-discrimination requirement of the Agreement on Safeguards, and raises the concern of trade diversion. Nevertheless, such provisions enable trade to continue to flow between PTA members, and are again indicative of the challenging balance to be struck between facilitating intra-member trade while avoiding raising barriers to trade with non-members. A small number of agreements do tighten the conditions applicable to the PTA member in the event that a global safeguard is invoked, by for example providing for retaliation by the exporting member if mutually-agreed compensation is not provided by the importing member (e.g. in CUSFTA [1989], NAFTA [1994] and Canada-Chile [1997]). This potentially curbs the use of global safeguard measures by PTA members, thus benefiting the broader WTO membership. In any case, the trend in the exclusions of PTA partners has decreased over time relative to the number of agreements sampled.

Special agricultural safeguards (SSGs) are permitted under the WTO AoA as transition measures to enable countries to adapt to agricultural trade liberalisation. Under the AoA, the use of SSGs is only allowed for products that were newly tariffied (converted from quota to tariff quota) and indicated as potentially subject to SSGs at the time that the AoA was signed. Unlike safeguards under the WTO SCM Agreement, agricultural and textile SSGs can be applied on the basis of price or import volume triggers, without demonstration of damage to the domestic industry.

SSGs in bilateral and regional trade agreements do not have the same set of rules and criteria as those under the AoA, but their objective is the same, namely to protect domestic markets from surges in imports or unusually low global prices. 28% of the agreements sampled contain agricultural SSGs. These usually allow a PTA member to impose additional duties on sensitive agricultural imports – up to the MFN rate – once imports exceed a price or volume threshold. They may also extend beyond the transitional period of the PTA. Relative to the number of agreements sampled, however, there has been a decrease in the inclusion of agricultural SSGs over time. This may suggest that non-specific bilateral or regional safeguards are considered to be sufficient to protect agricultural markets from liberalisation, or it may simply reflect a slow-down in tariff concessions for sensitive products such as rice, cotton and sugar.

The conditions under which agricultural SSGs in PTAs can be invoked, their duration and the specifications for their implementation vary considerably across the agreements sampled. Many (e.g. CAFTA-DR [2006] and Republic of Korea-US [2012]) establish import volume triggers; others quota or price triggers, or a combination of both (e.g. US-Australia [2005]); and some (e.g. CEFTA 2006 [2007]) require serious injury or disturbance to the domestic sector (or the threat of such). The quantity and price at which market disruption can take place varies with the size of the market and its importance to the parties concerned, amongst other factors (OECD, 2015). Notification periods and sunset clauses also vary, as do the tariff remedies themselves. The scope of products concerned also differs across agreements, with some SSGs only applying to one or a limited range of agricultural products (e.g. sugar in CARIFTA [1968]; fresh fruits and vegetables in CUSFTA [1989]; beef and horticultural products in US-Australia [2005] or milk products in the Trans-Pacific Strategic Economic Partnership [2006]), whereas others (such as the SSG in Australia-Papua New Guinea [PATCRA, 1977]) apply to the sector as a whole. Nevertheless, agricultural SSGs in the sample most frequently apply to primary

unprocessed products, and sensitive products such as sugar and dairy in particular. Finally, in a very small number of cases (e.g. PATCRA, Australia-China [2015] and CETA [2017]), special agricultural safeguards can only be applied by one of the parties.

Given the abovementioned heterogeneity, it is difficult to determine whether there has been shift towards more restrictive coverage, volume triggers, duration and remedies in PTAs over time. Moreover, if there is increased stringency in the use of SSGs, this could indeed suggest a shift towards greater liberalisation, but not necessarily the case, as the criteria for invoking general bilateral safeguards are also important. In addition, increased stringency of SSGs within agreements could equally trigger more special safeguard actions against *non*-members, as mentioned earlier (OECD, 2015). Indeed, an increase in actions against non-PTA members has been observed by other studies in recent years (Chauffour and Maur, 2011).[41]

Finally, relatively few agreements sampled (11%) contain special textile safeguards, the majority of which are agreements involving the United States. Agreements include NAFTA (1994), Canada-Chile (1997), US-Australia (2005), CAFTA-DR (2006) and Korea-US (2012), and tend to focus on sensitive products such as cotton. Of the agreements sampled, the number of agreements containing textile SSGs has decreased relative to the increase in agreements over time, again perhaps reflecting the stagnation of the preferential tariff margin for cotton since the 2000s.

Food security, animal welfare and sustainable development

Government interest and regulatory interventions in the agricultural sector also extend beyond the functioning of markets. The agricultural policies of a number of countries contain explicit objectives related to food security, animal welfare and sustainable development. These issues often also arise in the trade context, with discussions around the impact of imports or exports on outcomes in these areas. However, explicit references to these subjects within the agreements sampled are relatively limited, suggesting that such provisions may not yet be commonly used (with the caveat that of course the sample only includes a relatively small number of agreements, many of these relatively dated). These references are explored in further detail below.

Food security

International trade has contributed to improvements in food security by allowing food to flow from surplus to deficit regions. It also provides for income growth opportunities for farmers, particularly those in developing countries in recent years. It can also allow for the sharing of production risks across countries, aiding the general stability of access to and availability of food. However, the surge in international food prices in 2007-08, exacerbated by new export restrictions and increased export taxes on agricultural commodities, highlighted the need for further international co-operation on matters affecting food security.

[41] It is also worth noting that in some cases, infant industry safeguards can also be applied to agricultural products. EFTA-Palestinian Authority (1999), for example, permits "structural adjustment charges" on certain products, processed agricultural products included.

Food security is explicitly mentioned in 31% of the agreements. However, its inclusion has lessened over time relative to the number of agreements sampled. In some cases, food security provisions focus on co-operative efforts, such as the requirement in COMESA (1994) that parties co-operate to enhance regional food self-sufficiency, including in the production of protein-rich foodstuffs or, more specifically, in ECOWAS (1993) and the Andean Community (or Cartagena) Agreement (1996), to harmonise policies.[42] In a number of cases (e.g. CARIFTA [1968], PATCRA [1977], ANZCERTA [1983], SADC [2000] and PICTA [2003]), the general exceptions articles of agreements explicitly permit, as provided by GATT Article XI:2(a), exceptions from other provision areas of measures considered necessary for food security.[43]

It should be noted, however, that explicit references to food security in agreements are not necessarily reflected in the content of the many other provisions which may also have an impact on food security, such as distorting forms of agricultural support, export subsidies, tariffs, investment and intellectual property rights, among others. And while agreements of this type are not focused on food security, provisions should at least be consistent with policy approaches that promote food security collectively. Food security is a multifaceted issue, encompassing a variety of factors including income, prices, stability and variety of supply, and sustainable resource use. In this light, for agreements to have a positive impact on food security, provisions across all other areas should be coherent. In some cases, for example, provisions specifically permit, as provided by GATT Article XI, quantitative export restrictions where there are critical shortages of foodstuffs. While provisions of this kind merely echo multilateral rules, it could of course be argued that they undermine the food security of importing parties or food security globally.

Sustainable development and environmental protection

The inclusion of environmental provisions in PTAs stems from the recognition by the 1992 Rio Declaration of the United Nations that economic development and environmental protection are interdependent elements of sustainable development. Furthermore, while environmental considerations may be used in certain specific circumstances to justify restrictions on trade, trade liberalisation can itself make a positive contribution to sustainable development (George and Yamaguchi, 2018).

Sustainable development and/or environmental protection elements are more prevalent than food security or animal welfare in the PTAs sampled (note that the sample does not include any environmental side agreements which may have been concluded between parties).[44] They have also been increasingly included over time. A total of 61% of agreements include these provisions, if general exceptions for measures relating to the

[42] Art. 25 of ECOWAS (1993) refers to "food security policies", while Art. 99 of the Andean Community Agreement (1996) appears to refer to agricultural policies more broadly.

[43] While explicit reference to GATT Article XI:2(a) was coded as a food security provision, general references to GATT Articles XI or XX, or to measures necessary to protect human health, were not. See typology in Annex A for details.

[44] Sustainable development is defined here as development which seeks to balance economic, environmental and social dimensions in a long-term and global perspective (OECD, 2011). Given the multifaceted nature of sustainable development, however, only explicit references to "sustainable development" or "sustainability" were coded as sustainable development provisions.

conservation of exhaustible natural resources and the environment are taken into account.[45] This increase is most likely linked to the rising policy focus (and perhaps also civil society pressure) in this area. Another potential reason is suggested by George (2014), who argues that the incorporation of environmental provisions in PTAs has assumed greater importance due to limited progress made on these issues at WTO level in recent years. Finally, the extension by certain countries (such as the United States and European Union) of their political mandates to include provisions for compliance with multilateral environment agreements (MEAs) is also likely to have played a role. The earliest observed references to the environment are in the 1960s and 1970s (namely LAFTA [1961] and PATCRA [1977]), and are generally found in the context of general exceptions to the agreement, which frequently permit exceptions for measures aimed at the conservation of natural resources.

In addition to general exceptions, environmental references frequently take the form of pledges to co-operate on environmental matters (such as in Chile-China [2006]), including co-operation on research and development for environmental conservation (such as in ECOWAS [1993]); Other references include the setting of sustainable development objectives (CARICOM II [2001]); environmental performance requirements for investments (Peru-Singapore [2009]); commitments to monitor compliance with, and investigate suspected violations of, domestic environmental laws and regulations (Japan-India [2011]); and dedicated chapters on environment and/or sustainable development (including ECOWAS, US-Australia [2005] and CAFTA-DR [2006]).

Nevertheless, a closer look at the inclusion of environment chapters presents a slightly different picture. Only 17% of the agreements contain these; trends in the inclusion of environment chapters have not kept pace with the increase in agreements, even within the most recent PTAs; and only two (EEA [1994] and COMESA [1994]) refer to agriculture within their environment chapters. The explicit agricultural reference in the environment chapter of the EEA appears to be relatively narrow.[46] However, in COMESA, parties pledge to take measures to control air and water pollution arising from agricultural activities, encourage the manufacture and use of biodegradable pesticides and herbicides, and discourage the excessive use of agricultural chemicals and fertilisers.

Looking specifically at sustainable development, 19% of agreements sampled contain explicit provisions in this area. These are first observed in the mid-1990s. The inclusion of provisions has not kept pace with the number of agreements, notwithstanding the increasing prominence of the UN Sustainable Development Goals and preceding Millennium Development Goals. This may be due both to the abovementioned increasing focus on environmental aspects in particular, and the sensitivities involved, especially for developing countries, in addressing social elements within PTAs. None of the explicit sustainable development provisions identified refer to agriculture.

[45] General exceptions in PTAs lay out a number of specific instances in which parties to the agreement may be exempted from the subsequent provisions. These tend to be based on GATT Article XX, which includes exceptions for measures relating to the conservation of exhaustible natural resources. Only explicit references to natural resource conservation or environmental protection were coded as environmental provisions.

[46] *Annex XX on Environment: List provided for in Article 74*, which lists the provisions of (environmental) protective measures that shall apply, includes one piece of legislation that explicitly concerns agriculture: *Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture*.

The environmental elements of sustainable development are often explicitly recognised in the agreements, evident in a number of commitments to co-operate on this as a means to achieve sustainable development (including in CAFTA-DR [2006], Korea-US [2012], EU-Central America [2013], Switzerland-China [2014] and CETA [2017]). Explicit commitments to co-operate on economic and social elements of sustainable development are less common, but are included in EU-Central America (social), and Switzerland-China and CETA (social and economic), for example. Chapters or Titles explicitly dedicated (in the title) to sustainable development appear to be a relatively recent phenomenon, with only two recent agreements (EU-Central America and CETA) containing these. Finally, explicit references to "sustainable…agriculture" or "agricultural sustainability" appear to be relatively rare in the agreements sampled, the exception being CARICOM II (2001), which requires member states to assist each other in the management of natural resources "in support of the transformation and sustainable development of the agricultural sector".[47] The relatively low number of explicit references may suggest that sustainable agriculture is either not a priority in the context of PTAs, or is simply framed in more indirect wording.

Animal welfare

Animal welfare is a cross-cutting concern that affects a range of agricultural trade and trade-related issues, including the breeding, handling, use in science, transport, storage and slaughter of animals, and SPS issues such as disease prevention and treatment. However, while the WTO recognises the World Organisation for Animal Health (OIE) as the standard-setting organisation for animal health and zoonoses, there is no specific explicit mention of animal welfare in the WTO agreements.

Of the agreements sampled, only two, both of which are European Union-based agreements (with Central American countries and Canada), and relatively recent (2013 and 2017 respectively), were found to refer explicitly to animal welfare.[48] Both require that parties co-operate and provide expertise on this issue. No instances were found in the sample of explicit references to animal welfare with respect to agriculture.

Investment, intellectual property and competition

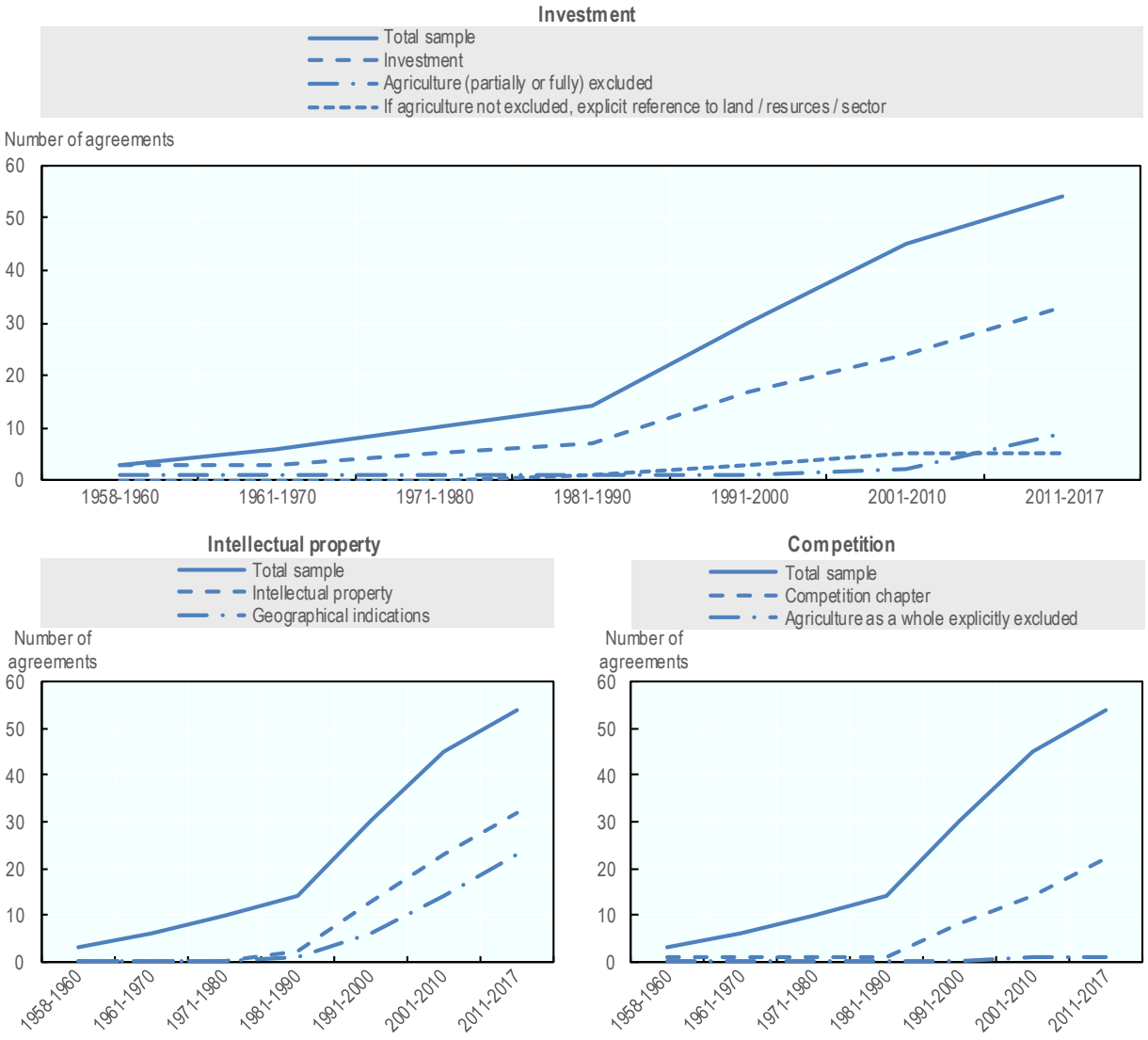
Bilateral and regional trade agreements have been expanding in scope over time. The move from a focus on market access issues to broader issues that relate to both tradable and non-tradable sectors, such as the structure and functioning of markets, is reflected in part through the rising use of investment, competition and intellectual property (IP) provisions (Figure 23).

[47] Article 58 on Natural Resource Management.

[48] General SPS measures were not coded as animal welfare provisions.

Figure 23. Investment, IP and competition provisions

Number of provisions and exclusions in the sample of agreements



Note: Of the 54 agreements sampled.
Source: Author estimates.

Investment

Trade and foreign direct investment (FDI) flows have become more interdependent in the context of expanding global value chains and firms' vertical specialisation strategies. With this, investment provisions have increasingly been incorporated within comprehensive bilateral and regional trade agreements instead of stand-alone bilateral investment treaties (BITs) (Lesher and Miroudot, 2006; Chauffour and Maur, 2011; Thrasher, Bevilacqua and Capaldo, 2015), thus capitalising on the complementary relationship between trade and FDI. Investment provisions in PTAs and their relationship with core trade provisions for goods are studied in further detail in a forthcoming OECD study (Miroudot, 2018 [forthcoming]). Investment provisions in agreements can have extensive

implications for agriculture, determining access to land and other key natural resources.[49] In this report, the focus is whether, if these provisions are included, agriculture is excluded or not.

Of the agreements sampled, 61% contain investment provisions, the majority of which provide for the protection of foreign investors on the basis of most-favoured nation and/or national treatment principles, for example (Figure 23). While the scope and depth of these provisions have not been explored in this study, they appear to have become increasingly detailed over time, with the majority of agreements that enter into force from 2007 onwards containing either a chapter or a significant section on investment.

Amongst the agreements examined (and of those that did not exclude agricultural products from the overall agreement), a relatively small number (17%) explicitly exclude investment in aspects of the agricultural sector from certain commitments. In almost all cases, these exclusions take the form of "reservations" or exceptions to obligations such as national treatment or MFN treatment. Reservations by certain parties to national treatment are the most common, including reservations intended to prevent foreign citizens or non-residents from acquiring ownership of land intended for agricultural purposes or from investing in agricultural businesses in certain countries, or to allow governments to screen proposals by non-nationals to invest in agricultural land or agri-businesses. Agreements featuring such exceptions include NAFTA (1994), Japan-India (2011), EFTA-Ukraine (2012) and EU-Central America (2013). These exceptions, while narrow and not applied by all parties, have increased in frequency in recent years, with almost all agreements entering into force after the mid-2000s containing an agriculture-related exception. Although it could be argued that these reservations represent an erosion of investment liberalisation to some extent, it could equally be said that they provide governments with a means to secure political support for the inclusion of substantive investment provisions in PTAs.

It is noteworthy that only four of the agreements (SPARTECA [1981], ECOWAS [1993], COMESA [1994] and CARICOM II [2001]) make explicit reference to agriculture *not* to make reservations, but on the contrary to encourage investment in the sector through co-operation between members, the harmonisation of policies, and joint projects. All of these are agreements among developing economies, and enter into force in the 1980-2001 period.

Competition policy

Competition policy can contribute to the growth of international trade and economic development by creating a more competitive environment for domestic and foreign firms. In the context of agreements, it is also applied to address practices, such as international cartels or import/export monopolies, which can distort markets and disadvantage consumers or import-reliant industries, even in the absence of government-imposed trade impediments.[50] While a range of GATT and WTO articles and agreements address anti-competitive behaviour, there exists no single multilateral competition framework to address the growing need to ensure that trade liberalisation efforts are not undercut by restrictive

[49] For this reason, a number of international instruments, including OECD-FAO guidance (OECD/FAO, 2016), address responsible investment in agriculture.

[50] This is not to say that all competition policy is automatically a tool for trade liberalisation. The possibility that competition policy is used as a substitute for trade restrictions in some trade agreements has been explored by Bradford and Büthe (2015), but no significant evidence of protectionist efforts has been found.

behind-the-border competition practices. This may partly explain the observed rise in PTAs with substantive competition provisions. PTAs can also provide additional incentives, in the form of aid or technical assistance, for the establishment or strengthening of competition rules by certain parties to agreements. A further incentive to include competition policy is that it might enable the elimination of anti-dumping rules (Hoekman, 1998), although this theory does not appear to be strongly supported by the agreements sampled for this study.

While many of the PTAs sampled generally refer to anti-competitive behaviour or practices, this study only explores broad trends in the number of PTAs that contain a chapter on competition law or policy (Figure 23). These appear to be a relatively recent feature of the agreements. With the exception of the EEC Treaty of 1958, competition chapters are first observed in agreements entering into force in the mid-1990s, and from 2009 onwards, almost all agreements sampled feature a dedicated chapter or section. In total, 41% of sampled agreements contain a competition section or chapter. Only one agreement, the Trans-Pacific Strategic Economic Partnership (2006) was found to exclude agriculture from its competition chapter. While this does not take into account exclusions from competition provisions in agreements with no competition chapter, it does suggest that there is not a strong intent to treat agriculture differently with respect to general competition issues.[51]

Intellectual property

Intellectual property (IP) rights can affect not only the process of technology transfer via licensing and FDI, but also the pattern of international trade (Saggi, 2016). Previous analysis has found that IP-related trade agreements have significant effects on the aggregate trade of PTA members (Maskus and Ridley, 2016). While these effects are most often found in middle-income developing countries, they also characterise particular sectors in high-income and low-income countries.

The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which entered into force in 1995, sets binding minimum standards for IP protection that are enforceable by the WTO's dispute settlement procedure. However, in the decades since the ratification of TRIPS, as IP efforts in multilateral fora have slowed, it has been suggested that certain developed economies in particular have increasingly turned to PTAs to secure stronger protection of IP rights (Baccini, Dür, Elsig and Milewicz, 2014).

Over half of the agreements sampled (59%) feature IP provisions (Figure 23). These are relatively heterogeneous, ranging from pledges – in some of the early agreements in particular – to simply exchange information or consult partners on patent and trademark legislation, to extensive chapters dedicated to intellectual property in the later agreements. The latter often contain explicit provisions on specific fields of IP law, such as patents, trademarks and geographical indications. IP provisions are first observed in the mid-1980s and increase in frequency thereafter. The adoption of the TRIPS Agreement in 1994 may have spurred further inclusion of IP provisions, as almost all agreements entering into force from the mid-1990s onwards contain these.

[51] State aid does not fall under competition policy *per se*, but can be found in competition chapters of some of the sampled PTAs, particularly those involving the European Union.

Nevertheless, trends in reaffirmation of obligations under multilateral agreements and commitments to co-operate in multilateral fora do not appear to have been strongly influenced by the adoption of TRIPS. In the decade prior to the adoption of the Agreement, some instances of reaffirmation can be observed; in the aftermath, however, no significant increase is observed until the 2010s – the majority of sampled agreements entering into force in 2010 onwards affirm rights and obligations of PTA members under TRIPS, while others (e.g. EU-Central America [2013] and CETA [2017]) assert that the provisions complement these rights and obligations. Finally, it is interesting to note that some of the agreements (e.g. NAFTA [1994]) expressly provide that parties may implement more extensive protection of IP rights (IPR) than required under the PTA.

Amongst the agreements examined (and of those that do not exclude agricultural products from the overall agreement), none explicitly exclude agriculture from these provisions. Nevertheless, it is debatable as to whether this lack of exclusion is meaningful, given that explicit exclusions from IP rules do not appear to be a common feature of the sampled PTAs.

The majority of new innovations in agriculture are related to the generation of new varieties of plants, as well as seeds. One key area for the sector is therefore IP rights protection for plant varieties, which is governed by TRIPS. The principle forms of plant variety protection are plant patents, plant variety protection patents (PVPs – a system of plant variety protection based on plant breeder's rights) and utility patents. References to plant variety protection first appear with NAFTA in 1994, which requires Mexico to accept applications from plant breeders for varieties in all plant genera and species, and grant protection. The inclusion of plant variety protection provisions within the sampled agreements is relatively slow thereafter until the 2010s. Nevertheless, the majority of agreements in the last decade provide for the protection of plant varieties.

Another form of IPR which holds significant importance for the agricultural sector are Geographical Indications (GIs). GIs identify a good as coming from a country, region or locality where a particular quality, reputation or other specific characteristic is attributable to that geographic origin. While GIs can be used for a variety of products, whether natural, agricultural or manufactured, agricultural goods dominate their use. Examples of some claimed GIs include Tequila, Cognac, Champagne, Darjeeling, Parmigiano Reggiano and Parma ham. GIs are protected as intellectual property by the TRIPS Agreement, which also provides for additional protection for wines and spirits. Under TRIPS, countries are obliged to prohibit the use of a designation that indicates or suggests that the good originates from an area other than its true place of origin. That said, TRIPs does not specify the manner in which such protection is to be provided, nor specify which terms are considered to qualify as GIs. The latter in particular can be controversial, with certain countries considering some terms to be GIs and thus protected intellectual property, while others consider them to be generic or semi-generic terms (Johnson, 2017).

Almost half (43%) of agreements sampled include provisions on GIs, equating to 72% of sampled agreements with intellectual property provisions. The majority of these take the form of commitments to protect GIs. While references to GIs are first observed in the late 1980s, the number of agreements sampled that mention these significantly increase from the mid-2000s onwards, with almost every new agreement in that period making reference to GIs or to "distinctive products" of the countries concerned. The vast majority of GIs explicitly referenced concern alcoholic beverages (including in CUSFTA [1989], EEA [1994], NAFTA [1994], Canada-Chile [1997], CAFTA-DR [2006], Chile-China [2006], Korea-United States [2012] and CETA [2017]). In a much smaller number of cases, GIs

are provided for types of tea (Chile-China [2006]), corn (Peru-Singapore [2009]), coffee (e.g. EU-Central America [2013]), meat products, vinegar, cheeses, confectionery and other products (e.g. CETA [2017]).

Co-operation on agricultural research, development and training

Trade agreements may play an important role in enhancing agricultural research and development through the facilitation of regional and international research collaboration in R&D projects, networks and capacity building.

A total of 18% of agreements sampled include provisions that explicitly refer to co-operation on agricultural research, development and / or extension and training. Given that agriculture may also be implicitly included in broader provisions for co-operation on R&D and training, which more commonly feature in the agreements than sector-specific provisions, the share of explicit references to agriculture is not insignificant, and may reflect the importance of international co-operation in this area. Examples found in the agreements include references to co-operation on vocational training and research in the context of the common agricultural policies of the agreements (including the EEC [1958], ECOWAS [1993] and CARICOM II [2001]), In some cases, very specific provisions are included. COMESA (1994), for example, provides for the establishment of data banks and journals for the dissemination of agricultural research and extension information; CARICOM II requires parties to collaborate with education and training institutions and regional and international organisations to develop harmonised agricultural syllabuses, utilising distance education technology; Australia-China (2015) obliges parties to explore the possibility of conducting possible joint research projects on animal and plant diseases and pest prevention, surveillance strategies and food safety; and the Andean Community (1996) calls for joint co-operative policies in genetic research and technology transfer.

Nevertheless, the number of agreements making explicit reference to co-operation on agricultural knowledge generation and transfer has gradually decreased over time relative to the number of agreements sampled.

Dispute settlement

Effective dispute settlement instruments are essential for the functioning of regional trade agreements. By providing a means for PTA members to manage disputes, dispute settlement provisions may help to prevent disputes that would otherwise undermine relations, and potentially jeopardise the agreement itself. They also ensure that commitments are kept. Even if no disputes are anticipated, enforcement provisions strengthen the credibility of agreements, both with governments and the wider public.[52]

It is therefore not too surprising that dispute settlement provisions have been observed in the vast majority (94%) of trade agreements sampled. Dispute settlement in the PTAs is largely dominated by consultation procedures (such as in PATCRA [1977], SPARTECA [1981], ANZCERTA [1983] and PICTA [2003]) and the establishment of arbitration tribunals (in CAFTA [1959] and CACM [1961]). In many of the cases, consultations are a means for the parties to discuss the issue without formal third-party involvement before the dispute goes to a more formal channel. In some cases (e.g. PICTA [2003]), agreements provide for assisted negotiations in the form of mediation in the event that consultations

[52] Beyond dispute settlement, the importance of enforcement for trade flows is discussed in the SPS and TBTs section of this report.

are unable to resolve the dispute, and, if mediation is unsuccessful, for external arbitration. Over time, references to external bodies (mostly GATT/WTO) appear to increase (recent agreements referring to external bodies include Switzerland-China [2014], Japan-Australia [2015], Australia-China [2015] and CETA [2017]). None of the agreements sampled explicitly provide for the exclusion of agriculture from the general dispute settlement provisions.[53]

5. Conclusions and key findings

The samples on which this study is based represent relatively small shares of the total number of agreements both inactive and in existence across the world today. Nevertheless, the evidence collected from the sample of 54 bilateral and regional trade agreements, and from the analysis of tariff preferences and rules of origin more broadly, would suggest that trade agreements have been a tool to deliver some greater openness in agricultural markets on a number of fronts. Furthermore, the widening of the scope of the agreements appears to have "carried" the agriculture sector along to a large degree, with agreements applying these broader provisions, with or without limited exceptions, to relevant issues in the sector.

Key findings

At the level of the provisions in agreements, agriculture appears to be increasingly treated in a similar manner to other goods trade. While exclusions of agricultural commodities from specific provisions within the trade agreements are not uncommon, in many cases these include relatively narrow exclusions. Moreover, the number of agreements featuring exclusions has not kept pace with the increase in the number of sampled agreements, and there are also few instances of exclusion of agricultural products from the entirety of the agreements. In addition, where agriculture-specific provisions have been explored, these have been found to be relatively few, and tend to take the form of trade remedies, such as countervailing measures to address export subsidies.

Across time, based on the sample, there is also an increasing tendency to treat agriculture within the broader context of the agreement rather than to include a specific chapter pertaining to the sector. Such a tendency could be indicative of partners' willingness to treat agriculture on a more equal footing to other goods trade. There also does not appear to be an implicit treatment of agriculture which is then caveated through special and differential (SDT) arrangements – at least not in a manner that treats agriculture in a different manner from other commodities.

Agreements do not tend to address public support to agriculture. The vast majority of bilateral and regional trade agreements sampled do not provide a tool to address trade-distorting forms of producer support. Indeed, the inclusion of even limited restrictions or limits on domestic support is decreasing over time. The low levels are perhaps unsurprising given the non-preferential nature of support – it cannot be reduced to increase

[53] In a number of agreements, dispute settlement mechanisms are either provided specifically for certain provision areas, or specific provision areas (usually SPS, TBTs, competition policy and investment) are excluded from the general dispute settlement mechanisms that otherwise apply to the agreement. The exclusion of agriculture from provision-specific dispute settlement instruments, or the exclusion from general dispute settlement of a provision area which applies to agriculture (and other areas) are not coded as an exclusion from general dispute settlement provisions.

competition with one trading partner and not another. Provisions on state trading have also declined relative to the sample.

Bilateral and regional trade agreements appear to be strongly influenced by the multilateral framework. It is clear that the multilateral framework has had a significant influence on the provisions concerned – multilateral rules appear to have in many cases facilitated the inclusion of provisions within agreements (on SPS measures, TBTs and safeguards, for example), and are reaffirmed within a large and often increasing number of agreements over time. In other instances (e.g. intellectual property, export restrictions and prohibitions), a perceived lack of progress in the multilateral arena appears to have spurred countries to seek out alternative solutions amongst smaller numbers of parties.

Agreements are delivering reduced tariffs among the parties across the majority of agricultural commodities. Agreements appear to have been delivering improvements in market access among the parties, with the tariff preference margin growing significantly over time. The increasing number of PTAs has also led to a substantial increase in the number of tariff lines that are subject to preferential rates. However, despite the improvements seen, the preference margins remain limited to the set of parties to individual agreements. The potential for trade diversion is high, and therefore these agreements cannot capture the full benefits on offer from more universally-applied tariff reductions. They may nevertheless create a situation over time where opposition to non-preferential tariff reductions declines due to the wide range of concessions already made.

Heterogeneity of rules of origin between agreements is likely to be undermining the benefits of tariff reduction. The design of rules of origin (RoO) can influence the extent of liberalisation that can occur, as they restrict the type or level of trade that can access the preferential treatment agreed. RoO applied to agriculture are found to be more restrictive than those for manufacturing. There has also been a lack of consistency in RoO applied to agriculture across the agreements and, as the number of agreements has grown, this has increased compliance costs associated with exporting to members of different PTAs. Given these costs, exporters may choose not to access preferences, thus reducing the actual market access gains that are *prima facie* created by tariff reductions.

Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT) have become a standard feature of agreements. Agreements have increasingly focused on non-tariff measures, expanding in scope to cover SPS measures and TBTs. While these first appear in the 1980s, they accelerate in the 2000s in particular, and have since become a standard feature in the majority of agreements. This relatively recent surge, no doubt spurred by the entry into force of the WTO SPS and TBT Agreements in 1995, may also be due to decreases over time in the adjustment costs of participation in the SPS and TBT provisions of new or expanded PTAs, as competent authorities accumulate experience in their implementation. Trade agreements largely attempt to narrow differences between regulatory regimes as means to capture the benefits created by these measures while at the same time reducing the trade costs involved in complying with them. They are also clearly being used to move regulatory frameworks towards greater transparency and equivalence-based measures provided under the WTO Agreements, thus potentially facilitating trade flows not only among signatories but also non-members. Finally, there is no evidence of the special treatment of agriculture with respect to TBTs.

The inclusion of trade remedies is increasing in line with trade liberalisation efforts. The elimination of intra-regional tariffs appears to have increased the appeal of trade remedies, including for agriculture. These are a feature of the vast majority of sampled agreements, and increasingly so. Of the three main forms of remedies explored, safeguards are the most

commonly-observed remedy, followed by anti-dumping. Few of the agreements abolish countervailing duties and anti-dumping measures with immediate effect, perhaps due to the relative lack of disciplines on subsidies in agreements. The heterogeneity of the safeguards featured means that it is difficult to determine whether there has been shift towards more stringent conditions for their application to members, and if so, the implications of this for liberalisation. In any case, it could be argued that the restricted application of safeguards against members enables trade to continue to flow between them, and is indicative of the balance to be struck between facilitating intra-member trade while avoiding raising barriers to trade with third countries. The agreements examined do not exclude agriculture from general trade remedies, and agriculture-specific remedies are relatively uncommon.

Trade agreements generally seek to discipline export measures. The agreements explored generally seek to limit, and in some cases ban, the use of export measures – export restrictions, taxes and subsidies – representing an important step towards trade liberalisation. The number of agreements that ban or limit export restrictions or prohibitions has increased over the years, albeit with a slight slow-down in the 2000-10 period. In contrast, the number of agreements that prohibit or restrict export taxes or duties, or that phase out or restrict the use of export subsidies, have generally decreased relative to the number of agreements sampled in recent decades. The treatment of agriculture varies across the measures concerned. Agriculture is rarely exempt from prohibitions on export subsidies – indeed, a number of agreements sampled specifically prohibit or phase out *agricultural* export subsidies. In all but one case, disciplines on export duties are not specific to agriculture, and observed instances of exclusion of agriculture from disciplines on export duties and taxes are not that common. Finally, while until 2006, little discipline of agricultural export restrictions/prohibitions is observed, more recent agreements do not exclude agricultural commodities from disciplines. This may be due to increasing international awareness that agricultural export restrictions most likely contributed to the food price spike of 2007/8.

Recent features related to investment, competition and intellectual property appear to extend to agriculture. Bilateral and regional trade agreements have been expanding in scope over time. The move from a focus on market access to broader issues including the structure and functioning of markets is reflected in part through the rising inclusion of investment, competition and intellectual property (IP) provisions. Of the agreements sampled, a relatively large number contain investment provisions. A relatively small but increasing number explicitly exclude (albeit often to a narrow extent) investment in aspects of the agricultural sector from certain commitments. Similarly, while many of the PTAs sampled generally refer to anti-competitive behaviour, chapters on competition law or policy appear to be a relatively recent feature. Only one agreement was found to exclude agriculture from its competition chapter. While this does not take into account exclusions from competition provisions in agreements with no competition chapter, it does suggest that there is not a strong intent to treat agriculture differently with respect to broader competition rules.

For IP provisions, agriculture is never explicitly excluded – on the contrary, agriculture-related provisions appear to have increased in recent years. The majority of agreements entering into force in the last decade provide for the protection of plant varieties or refer to geographical indications (GIs). Of the latter, the majority take the form of commitments to protect specified GIs.

Substantive environmental, sustainable development, food security and animal welfare provisions within agreements are rare. While the agricultural policies of a number of countries contain explicit objectives related to food security, animal welfare and sustainable development, explicit references to these subjects in the agreements sampled are relatively limited. Sustainable development and/or environmental protection elements are more likely than food security or animal welfare to be at least referenced. Their inclusion within trade agreements has increased – most likely due to the rising focus on this area. Nevertheless, a closer look at environment chapters, which might indicate the presence of more substantive provisions, reveals that relatively few agreements contain these, and that trends in the inclusion of chapters have not kept pace with the increase in agreements sampled. In addition, relatively few agreements contain explicit provisions on sustainable development, and none of these provisions refer to agriculture. Similarly, the number of agreements that make explicit references to food security has lessened over time relative to the sample, and few explicitly provide for co-operation on agricultural research and development (R&D) and training. Finally, of the agreements sampled, only two refer explicitly to animal welfare.

Implications from the findings

It would appear from the agreements explored that the increasing number of preferential trade agreements is largely enabling greater trade liberalisation for the agricultural sector among members, and increasingly so. Nevertheless, these concessions remain preferential in nature, and therefore cannot necessarily guarantee market access for the most efficient producers globally. In particular, certain features of these agreements, such as heterogeneous and restrictive rules of origin, and perhaps trade remedies, special agricultural safeguards included, can lessen the extent of liberalisation achieved when viewed more holistically. Moreover, they are proving unable to effectively address certain market distortions, such as most-distorting forms of support to agriculture. These facets point to the continued importance of the multilateral framework and, despite gains seen in market access in particular, the benefits on offer from a more multilateral treatment of market access.

In order to derive the greatest benefits from the global trading system, progress at the multilateral level therefore needs to continue. Nevertheless, the range of issues explored within trade agreements, and the inroads made, will create an environment of international competition for agricultural sectors within member countries. This process has the potential to nudge countries towards freer agricultural markets, as increased competition makes certain forms of protection less sustainable, thus reducing demand for trade protection. In so doing, it can help to capture the benefits that freer markets will deliver for both consumers and producers alike.

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Annex A.

Typology to classify treatment of agriculture within preferential trade agreements

1. Cross-cutting questions

1.A.1. Date

In order to reflect changes over time, Memoranda of Understanding and amending annexes will be treated as separate agreements with respect to their date.

→ Date of entry into force of agreement or Memorandum of Understanding.

1.A.2. Type of agreement

WTO classification to be used.

Nature

→ Partial scope	(PS)	1/0 [Y=1, N=0]
→ Free Trade Agreement (FTA)	[1/0]	
→ Customs Union (CU)	[1/0]	
→ Economic Integration Agreement (EIA)	[1/0]	
→ CU and EIA	[1/0]	
→ FTA and EIA	[1/0]	
→ PS and EIA	[1/0]	

Coverage

Refers to all physical agreements (as opposed to notification to WTO), sorted by coverage.

→ Goods solely	1/0 [Y=1/N=0]
→ Services solely	1/0
→ Goods and services	1/0

Descriptive

→ Is there a chapter/section/title on agriculture?	1/0 [Y=1/N=0]

2. Market access

General exceptions from the provisions of the agreement as a whole for measures necessary to protect human, animal or plant life or health (such as for food security purposes) will not be considered to be an exclusion of agriculture, partial or otherwise, from either the agreement or any of its provisions. This equally applies to references to GATT Article XX on general exceptions.

The following are coded as provisions in agreements: statements of intentions to co-operate in a specific area (including multilaterally), establish working groups, references to "endeavour to" or "strive to" achieve an objective, etc. If however an agreement explicitly permits parties to apply their domestic laws in a certain area, this is not coded as a provision.

2.A. Tariffs

Data taken from WITS (2018).

2.B. Non-tariff measures

General provisions for non-tariff measures as a whole, with no explicit reference to the specific type of measure, will NOT be coded in the following sections.

2.B.1. Safeguard measures (global, bilateral/regional general and specific)

Includes global, bilateral/regional general and specific (e.g. special agricultural and textile) safeguards.

→ Does the agreement contain bilateral, regional OR global "safeguard measure" provisions? [Y=1/ N=0] (for all that follow)

→ Are any agricultural commodities excluded from these provisions? [1/0]

→ Is the agricultural sector as a whole excluded from these provisions? [1/0]

→ Does the agreement refer to GATT/WTO provisions on safeguards? [1/0]

→ Does the agreement provide for (meaning either permit or require) the exclusion of PTA partners from the application of global safeguards (with or without the proviso that certain conditions are met)? [1/0]

→ Does the agreement contain bilateral or regional safeguard provisions (be they general OR special/specific) for PTA parties? [1/0]

→ Does the agreement ban/disallow the use of bilateral (general OR special) safeguards?

→ Does the agreement contain provisions for a special/specific agricultural safeguard measure (textiles excluded; this could include a special safeguard measure with the stated aim of ensuring food security)? [1/0]

→ Does the agreement contain provisions for a special/specific textile safeguard measure (may include agricultural products such as unprocessed cotton, silk or wool)? [1/0]

2.B.2. Special and differential treatment (SDT/S&D)

→ In agreements with a developing country as a party, does the agreement make explicit reference to "special and differential treatment" / "special treatment" /SDT / S&D)?

→ Does this apply to "agriculture" / "agricultural products"/ "agricultural sector"? [1/0]

2.B.3. Sanitary and phytosanitary measures (SPS)

→ Does the agreement contain provisions on sanitary and phytosanitary (SPS) measures? [Y=1/N=0]

→ If so, does the agreement contain a reference to the GATT or the WTO SPS Agreement? [1/0]

→ Does it include provisions on any of the following principles:

→ Transparency (e.g. parties shall/should establish national enquiry points, notify creation/change of SPS regulations, etc.)? [1/0]

→ Equivalence (e.g. parties shall/should accept SPS measures of others as equivalent)? [1/0]

→ Harmonisation (e.g. parties shall/should base national measures or standards on international public standards)? [1/0]

→ Regionalisation (e.g. parties shall/should ensure that SPS measures are adapted to the characteristics of the area from which the product originated and to which the product is destined; accept imports from pest/disease-free areas)? [1/0]

→ Risk assessment (e.g. parties shall/should ensure that SPS measures take into account risk assessment techniques developed by relevant international organisations)? [1/0]

→ Is there any provision for the creation of joint SPS Committees (tasked with concluding bilateral arrangements and implementing SPS provisions)? [1/0]

2.B.4. Technical barriers to trade (TBTs)

→ Does the agreement contain provisions on technical barriers to trade (TBT)? [Y=1/N=0]

→ Is agriculture (partially or fully) excluded from the general TBT provisions? [1/0]

→ Does the agreement include agriculture-related (including food) TBT provisions (as opposed to just the general rules of the agreement)? [1/0]

→ If the agreement includes either specific agriculture-related provisions OR general provisions from which the agricultural sector as a whole is NOT excluded, does it refer to the WTO Agreement on Technical Barriers to Trade (TBT) / the GATT Standards code? [1/0]

→ Does it contain provisions on the following principles? [1/0]

→ Harmonisation (e.g. parties shall/should base regulations/standards on international standards or on other existing rules [including regional

rules]; or the creation of international standards or rules is promoted)? [1/0]

Note: Statements that parties should "bridge the gap", "reduce divergence", or "make compatible" their standards, technical regulations or conformity assessment procedures will be coded as 1.

→ Mutual recognition or equivalence (e.g. the recognition or acceptance of the assessment and certification/testing procedures [conformity assessments] or product standards/technical regulations of the other parties to the agreement)? [1/0]

→ Does the agreement provide for pre-shipment inspection, or alternatives such as third-party testing? [1/0]

→ Transparency (e.g. notification procedures, or the provision of contact points for enquiries or the establishment of regional consultations for the dissemination of information)? [1/0]

3. Domestic support

3.A Public support to agriculture

Support to agriculture akin to domestic support will be treated as a concept for the purpose of this question and will ONLY include explicit reference to the following: "domestic support", " producer payments", "direct payments", "input subsidies" "output payments", "output subsidies", "direct support", "price support", "funding mechanisms", "budgetary transfers", "price stabilisation", "stabilisation of prices", "price compensation", "price band/s", "minimum prices", "ensure reasonable prices", "state aid" , "aid to agriculture" and "aids for the production and marketing of the various products", together with broader references to "governmental support", "government aid" and "subsidies" explicitly for agriculture (research excluded).

References to tax concessions, support for agricultural research and services, export subsidies, subsidies where there is no explicit reference to agriculture, and more general terms such as "harmonization of fiscal incentives" or schemes for the promotion or rationalisation of agricultural production etc. will NOT be coded as support to agriculture.

→ Are there provisions regarding domestic support for agriculture? [Y=1/N=0]

→ Does the agreement refer to WTO provisions (e.g. the WTO Agreement on Agriculture)? [1/0]

→ Are there reductions in or limits on domestic support? [1/0]

4. Export competition

4.A. Export subsidies

→ Does the agreement contain provisions on export subsidies or export measures with equivalent effect to export subsidies? [Y=1/N=0]

References to Articles IX or X of the Agreement on Agriculture will be coded as provisions on export subsidies. However, general references to the Agreement on Subsidies and Countervailing Measures or Article XVI of the GATT 1994 (both of which address subsidies more broadly) will NOT be coded as export subsidy provisions unless explicit reference is

made in the text to export subsidies. Likewise, export promotion such as support for product development and market promotion of products for export will not be coded as export subsidies.

Export measures with equivalent effect to export subsidies are defined as export credits, export credit guarantees, export insurance programmes and food aid. References to "indirect subsidies", "all forms of subsidies" within export subsidy provisions, or "all forms of export subsidies" will also be coded as export measures with equivalent effect.

References to "any export subsidy" will only be coded as export subsidies.

→ Are any agricultural commodities excluded from these provisions? [1/0]

→ Is the agricultural sector as a whole excluded from these provisions? [1/0]

→ Does the agreement prohibit or phase out export subsidies or export measures with equivalent effect? [1/0]

→ Does it refer to export measures with equivalent effect to export subsidies (defined as above)? [1/0]

→ Does it prohibit or phase out these? [1/0]

4.B. Export duties or taxes

→ Does the agreement contain provisions on export duties or taxes? [Y=1/N=0]

→ Are any agricultural commodities excluded from these provisions? [1/0]

→ Is the agricultural sector as a whole excluded from these provisions? [1/0]

→ Does the agreement explicitly prohibit or restrict export duties or taxes? [1/0]

4.C. Countervailing measures and anti-dumping

Countervailing measures will be treated at a concept for the purpose of this question, and include items such as provisional countervailing duties, definitive countervailing duties and voluntary undertakings.

General references to the WTO Agreement on Subsidies and Countervailing Measures will NOT be coded as provisions on countervailing measures unless explicit reference is made in the article to such measures.

→ Does the agreement allow (either subject to conditions or not) for countervailing measures/duties (e.g. suspension of tariff elimination, additional tariffs, or the application of an export subsidy by the affected exporting partner)? [Y=1/N=0]

→ If so, is there provision for any agriculture-specific countervailing measures or duties? [1/0]

→ Or is the agricultural sector partially or fully excluded from these provisions? [1/0]

→ Does the agreement contain anti-dumping provisions?

→ Are any agricultural commodities excluded from these provisions? [1/0]

→ Is the agricultural sector as a whole excluded from these provisions? [1/0]

→ Are anti-dumping measures explicitly prohibited?

→ Or do parties allow anti-dumping measures only during a transition period?

→ Is there a reference to GATT or WTO provisions (e.g. GATT Art. VI or the WTO Anti-Dumping Agreement)?

4.D. State trading (export and import)

→ Does the agreement contain provisions on "state trading exporting enterprises", "state enterprises", "marketing boards", "marketing authorities", "control boards", "canalising agencies", "foreign trade enterprises", "national marketing organisations", "national market organisations", "state monopolies" or "state trading" ? [Y=1/N=0]

→ Are any agricultural commodities excluded from these provisions? [1/0]

→ Is the agricultural sector as a whole excluded from these provisions? [1/0]

→ Does the agreement make reference to GATT Article XVII or its principles of non-discrimination or commercial considerations? [1/0]

4.E. Export prohibitions and restrictions

Provisions on import licencing are not included in the coding of export restrictions.

With respect to the exclusion of agriculture, general references in provisions to GATT Article XI or GATT Article XX without further elaboration will NOT be coded as an exclusion. Only explicit references to human health or critical shortages of foodstuffs, OR specifically to GATT Article XX (b) (which allows for measures necessary to protect human, animal or plant life or health) OR GATT Article XI:2 (a) (which allows for temporary export prohibitions/restrictions to prevent/relieve critical shortages of foodstuffs or other essential products) will be coded as an exclusion.

→ Does the agreement make reference to export restrictions, including prohibitions? [Y=1/N=0]

→ Does the agreement explicitly ban or limit the use of export restrictions? [1/0]

→ Are any agricultural commodities excluded from this ban or limit on use? [1/0]

→ Is agriculture as a whole excluded from this ban or limit on use? [1/0]

→ Does the agreement refer to GATT or WTO provisions on export restrictions (e.g. the WTO Agreement on Agriculture or GATT Article XI) or otherwise include clauses that allow their use in the case of food shortages or for food security reasons? [1/0]

5. Other provisions

5.A. Investment

→ Does the agreement contain provisions on investment?

Explicit references to "investment" or "establishment" of agro-industries in a chapter on agriculture will also be coded as a provision on investment. Services chapters will however not be coded.

→ If so, is agriculture (partially or fully) excluded?

Reservations related to agriculture will be coded as a (partial) exclusion of agriculture.

→ If not excluded, is there explicit reference to "agriculture", "agricultural", "agricultural land", "agricultural resources", "agricultural sector", "agricultural products"?

5.B. Intellectual property (including geographical indications)

→ Does the agreement contain provisions on intellectual property? [Y=1/N=0]

→ Is agriculture explicitly excluded (fully or partially) from these provisions?

→ Does the agreement contain a provision on Geographical Indications?

5.C. Research and extension projects

→ Are there provisions for the development and co-ordination of research and development, extension and training projects in the agricultural sector?

5. D. Food security

While explicit references to measures to ensure the "adequate supply", "regular supplies", or "supply" or "availability" of food/agricultural products, "food security", "security of food", "food shortages" or specifically GATT Article XI:2(a) will be coded as food security provisions, general references to GATT Articles XI or XX or to measures necessary to protect human health will NOT.

→ Does the agreement contain provisions explicitly aimed at ensuring food security?

→ Is there reference to an "early warning system" to provide information on food security?

5.E. Competition policy

→ Does the agreement contain a chapter on competition? [Y=1/N=0]

→ Is agriculture explicitly excluded (fully or partially)? [1/0]

5.F. Animal welfare

General SPS measures will NOT be coded as animal welfare provisions.

→ Does the agreement include explicit provisions on "animal welfare" / "welfare of animals"?

→ Is there explicit reference to agriculture?

5. G. Sustainable development and environmental protection

→ Does the agreement include explicit provisions on "sustainable development", "sustainability" or environmental protection?

→ Does the agreement include explicit provisions on "sustainable development"?

→ Are there explicit provisions on "sustainable agriculture"?

→ Does the agreement include a chapter on environmental protection?

→ Is there explicit reference in the chapter to "agriculture", "agricultural sector" or "sustainable agriculture"?

5.H. Dispute settlement

→ Does the agreement include provisions for solving disputes?

→ If so, is agriculture explicitly excluded (fully or partially) from these provisions?

Annex B.

Preferential trade agreements examined and distribution of sample

Table A B.1. List of sampled agreements

Agreement name	Entry into force
EEC Treaty	01-01-1958
Central American Free Trade Area (CAFTA)	02-06-1959
European Free Trade Association (EFTA)	03-05-1960
Latin American Free Trade Area (LAFTA)	02-06-1961
Central American Common Market (CACM)	04-06-1961
Caribbean Free Trade Association (CARIFTA)	01-05-1968
Arusha Agreement	01-01-1971
EC-Egypt	01-11-1973
Australia-Papua New Guinea (PATCRA)	01-02-1977
EFTA-Spain	01-05-1980
South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	01-01-1981
Australia - New Zealand (ANZCERTA)	01-01-1983
US-Israel	19-08-1985
Canada - US Free Trade Agreement (CUSFTA)	01-01-1989
Southern Common Market (MERCOSUR) (Treaty of Asuncion)	29-11-1991
EFTA-Israel	01-01-1993
ASEAN Free Trade Area (AFTA)	01-01-1993
Economic Community of West African States (ECOWAS)	24-07-1993
European Economic Area (EEA)	01-01-1994
North American Free Trade Agreement (NAFTA)	01-01-1994
Ukraine-Russian Federation	21-02-1994
Common Market for Eastern and Southern Africa (COMESA)	08-12-1994
EC-Turkey	01-01-1996
Andean Community (CAN) (or Cartagena Agreement)	10-03-1996[a]
Canada-Israel	01-01-1997
Canada - Chile	05-07-1997
Pan-Arab Free Trade Area (PAFTA)	01-01-1998
EFTA-Palestinian Authority	01-07-1999
EC-Mexico	01-07-2000
Southern African Development Community (SADC)	01-09-2000
Caribbean Community and Common Market (CARICOM) II	01-01-2001
Pacific Island Countries Trade Agreement (PICTA)	13-04-2003
GUAM	10-12-2003
Southern African Customs Union (SACU)	15-07-2004
US - Australia	01-01-2005
South Asian Free Trade Agreement (SAFTA)	01-01-2006
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	01-03-2006
Trans-Pacific Strategic Economic Partnership	28-05-2006
Chile - China	01-10-2006
Agadir Agreement	27-03-2007
Central European Free Trade Agreement (CEFTA) 2006	01-05-2007
MERCOSUR - India	01-06-2009
Peru-Singapore	01-08-2009

Agreement name	Entry into force
ASEAN - Australia - New Zealand	01-01-2010
ASEAN - India	01-01-2010
Japan-India	01-08-2011
Korea, Republic of - US	15-03-2012
EFTA - Ukraine	01-06-2012
EU - Central America	01-08-2013
Switzerland-China	01-07-2014
Eurasian Economic Union (EAEU)	01-01-2015
Japan - Australia	15-01-2015
Australia-China (ChAFTA)	20-12-2015
EU-Canada Comprehensive Economic and Trade Agreement (CETA)	21-09-2017

Note: [a] Date of signature of agreement. Dates of entry into force (or of signature of agreement) are those of the particular version of the agreement analysed for the study.

Table A B.2. Distribution of agreements over time

Agreements sampled as share of total agreements entering into force each decade

Decade	Number of agreements sampled	Sample share of total agreements entering into force that decade (per cent)
1950-1960	3	75
1960-1970	3	15.7
1970-1980	4	8.8
1980-1990	4	30.7
1990-2000	15	9.5
2000-2010	16	10
2010-2018	9	9.6

Source: Author estimates.