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KEY STATISTICS AND TRENDS in Trade Policy 2018

TRADE TENSIONS, IMPLICATIONS FOR DEVELOPING COUNTRIES
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TRADE TENSIONS, IMPLICATIONS FOR DEVELOPING COUNTRIES
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NOTE

Key Statistics and Trends in Trade Policy is a yearly publication of the Trade Analysis Branch, Division on International Trade and Commodities, UNCTAD secretariat. The main purpose of this publication is to inform on the use and effects of a wide range of trade policies influencing international trade.

This study is part of a larger effort by UNCTAD to analyse trade-related issues of particular importance to developing countries in terms of their participation in the international trading system, as requested by the mandate of the fourteenth session of the United Nations Conference on Trade and Development. This study was prepared by Alessandro Nicita.
OVERVIEW

During the last decade international trade has been characterized by a progressive shift in the use of trade policy instruments. Despite the trade tensions that have characterised the last year, tariffs have remained substantially stable during the last few years with tariff protection remaining a critical factor only in certain sectors in a limited number of markets. On the other hand, the use of regulatory measures and other non-tariff measures is widespread and, in some cases, resulted in tensions among major economies. The implications of ongoing trade tensions for developing countries are discussed in the topical part of this publication.

As of 2017, developed countries’ tariffs restrictiveness was at an average of about 1.2 per cent. Tariff restrictiveness remained higher in many developing countries, especially in South Asia and sub-Saharan African countries. Moreover, tariffs remain relatively high in some sectors and tariff peaks are present in important sectors, including some of key interest to low income countries such as agriculture, apparel, textiles and leather products. Tariffs also remain substantial for most South–South trade. International trade is subject to and influenced by a wide array of policies and instruments reaching beyond tariffs. Technical measures and requirements regulate about two thirds of world trade, while various forms of sanitary and phytosanitary measures (SPS) are applied to almost all of agricultural trade. The past few years have also seen a general increase in the use of trade defence measures within the World Trade Organization (WTO) framework.

The process of deeper economic integration has remained strong at the regional and bilateral levels, with an increasing number of preferential trade agreements (PTAs) being negotiated and implemented. Most of the recent PTAs address not only goods but also services and increasingly deal with rules beyond reciprocal tariff concessions to cover a wide range of behind the border issues. As of 2017, about half of world trade has occurred under some form of PTA. The economic turbulence of recent years has been reflected in exchange rate markets, both for developing and developed countries’ currencies. Exchange rate movements are playing an important role in shaping international trade in the last few years as they have influenced countries’ external competitiveness. While currency movement have been small, the value of the United States dollar has remained strong in 2018.

This report is structured in two parts. The first part presents a discussion on ongoing trade tensions. The second part discusses trends in selected trade policy instruments including illustrative statistics. The second part is divided into five chapters: tariffs, trade agreements, non-tariff measures, trade defence measures, and exchange rates. Trade trends and statistics are provided at various levels of aggregation illustrating the use of the trade policy measures across economic sectors and geographic regions.
DATA SOURCES

All statistics in this publication have been produced by the UNCTAD secretariat by using data from various sources. Data on tariffs and non-tariff measures originate from the UNCTAD Trade Analysis and Information System (TRAINS) database (http://trains.unctad.org/), while data on bound tariffs derive from the WTO’s Consolidated Tariff Schedules database (tdf.wto.org). Trade data are from the United Nations Commodity Trade Statistics Database (COMTRADE; comtrade.un.org). Data on trade defence measures are sourced from the WTO I-TIP (i-tip.wto.org). Tariff and trade data are at the Harmonized System 6-digit level and have been standardized to ensure comparability across countries. Data related to preferential trade agreements are derived from various databases, including the WTO regional trade agreement gateway (rtais.wto.org) and the World Bank global preferential agreements database (wts.worldbank.org/gptad/trade_database.html). Yearly exchange rate data originate from financial statistics of the International Monetary Fund, and other macro level data used in the figures originate from UNCTADstat (unctadstat.unctad.org). Unless otherwise specified, aggregated data cover more than 160 countries representing over 95 per cent of world trade. Data on non-tariff measures covers around 80 countries, covering about 90 per cent of world trade.

Countries are categorized by geographic region as defined by the United Nations classification (UNSD M49). Developed countries comprise those commonly categorized as such in United Nations statistics. For the purpose of this report, transition economies, when not treated as a single group, are included in the broad aggregate of developing countries. Product sectors are categorized according to the Broad Economic Categories (BEC) and the International Standard Industrial Classification (ISIC). Preferential trade agreements that relate to both goods and services are counted as one. Non-tariff measures are classified according to UNCTAD classification 2012 (http://unctad.org/en/PublicationsLibrary/ ditctab20122_en.pdf).

Further information relating to the construction of data, statistics, tables and graphs contained in this publication can be made available by contacting tab@unctad.org.
GLOSSARY

Antidumping: A trade policy instrument within the WTO framework to rectify the situation arising out of the dumping of goods and its trade distortive effect

Applied tariff: The actual tariff rate in effect at a country’s border

Binding overhang: The extent to which a country’s WTO bound tariff rate exceeds its applied rate

Bound tariff line: See tariff binding

Countervailing duty: A tariff designed to counteract the effect of export subsidies

Coverage ratio: The percentage of trade affected by a measure or set of measures

Currency appreciation: An increase in the value of a country’s currency on the exchange market

Currency depreciation: A fall in the value of a country’s currency on the exchange market

Currency misalignment: An index measuring the divergence of the exchange rate from its long-term equilibrium

Deep trade agreements: Agreements that include provisions that go beyond reciprocal reductions of tariffs

Duty-free: Not subject to import tariffs

Effective exchange rate: An index of a currency’s value relative to a group of other currencies

Exchange rate volatility: The tendency for currencies to appreciate or depreciate in value within a period

Export restrictiveness: The average level of tariff restrictions imposed on a country’s exports as measured by the MA-TTRI

Frequency index: The percentage of tariff lines covered by a measure or set of measures

GDP: Gross domestic product

HS: Harmonized System – An international system for classifying goods in international trade

Import restrictiveness: The average level of tariff restrictions on imports as measured by the TTRI

LDC: Least developed country

MA-TTRI: An index measuring the average level of tariff restrictions imposed on exports

MFN (most favoured nation) tariff: The tariff level that a member of the General Agreement on Tariffs and Trade / WTO charges on a good to other members

NAFTA: North American Free Trade Agreement

Nominal exchange rate: The actual rate at which currencies are exchanged on the exchange market

NTM: non-tariff measure – Any policy, other than tariffs, that alters the conditions of international trade

Preferential scheme: An arrangement under which countries levy lower (or zero) tariffs against imports from members than outsiders

PTA: preferential trade agreement. This includes what WTO refers to as regional trade agreements and also free trade areas, custom unions and common markets.

REER: real effective exchange rate – The effective exchange rate adjusted for the rate of inflation

RPM: relative preferential margin – A measure of the preferential margin for a given country relative to foreign competitors
Safeguard: A WTO-compliant import protection policy that permits restricting imports if they cause injury to domestic industry

Shallow trade agreement: Preferential agreements including only a reduction of tariffs

SPS: Sanitary and phytosanitary measures

Tariff binding: A commitment, under the General Agreement on Tariffs and Trade, by a country not to raise the tariff on an item above the specified bound

Tariff escalation: Higher tariffs on processed goods than raw materials from which they are produced

Tariff line: A single item in a country’s tariff schedule

Tariff peak: A single tariff or a small group of tariffs that is/are particularly high

Tariff water: See binding overhang.

TBT: Technical barriers to trade

Technical NTM: Non-tariff measure related to SPS and TBT

Trade defence measure: Policies within the WTO framework preventing or correcting injury to domestic industry due to imports

True tariff water: Tariff water that takes into account implicit bindings imposed by PTA obligations

TTRI: Tariff trade restrictiveness index – An index measuring the average level of tariff restrictions imposed on imports

Unbound tariff line: See tariff binding

Weighted average tariff: Average tariffs, weighted by value of imports

WTO: World Trade Organization
The year 2018 has been an eventful one with regard to international trade. While trade continued to substantially outpace GDP growth, the last 12 months have also been characterized by several trade confrontations. While some confrontations have de-escalated through bilateral arrangements, some have further escalated. Most notably disagreements between the United States and China have escalated into rounds of retaliatory tariffs. Given the size of the economies involved, these tensions are of importance not only for the United States and China, but for all other countries.

The first round of retaliatory tariffs occurred in early 2018 when China and the United States imposed tariffs on about US$ 50 billion of each other’s goods. The confrontation quickly escalated, and in September 2018 the United States imposed 10 per cent tariffs covering about US$ 200 billion of Chinese imports, to which China retaliated by imposing tariffs on imports from the United States worth an additional US$ 60 billion. These tariffs were initially due to rise to a much more substantial 25 per cent in January 2019, however in early December 2018 the United States agreed to freeze the tariff increase until March 1st 2019.

The tariff imposed by the United States and China on each other in 2018 cover more than half of their bilateral trade (the total was valued at about US$ 640 billion in 2017). Both United States and China tariffs encompass a wide range of products, though most of them are concentrated in the manufacturing sectors (Chart 1). United States tariffs targeted about US$ 250 billion worth of imports, of which about US$ 120 billion related to intermediate manufacturing products, US$ 80 billion of capital manufacturing goods, and about US$ 50 billion to consumers’ manufacturing goods. Some of the United States tariffs also target China agricultural exports (about US$5 billion). China’s retaliatory tariffs include about US$ 50 billion of intermediate manufacturing products and US$ 20 billion of capital and consumers’ manufacturing goods. China also target almost US$ 20 billion in agricultural products (largely soybeans) and about US$ 4 billion in imports of energy products (largely liquefied gas). The relatively lower amount of trade affected by Chinese tariffs reflects its large bilateral trade surplus with the United States. While United States imports of goods from China were in the order of about US$ 505 billion in 2017, Chinese imports of goods from the United States were about US$ 130 billion.
While the brunt of the effects of the tariffs will fall on the two countries directly involved, when it comes to trade nothing happens in isolation. Trade tensions among major economies are bound to have spillovers, externalities and several ripple effects on many other countries. More so for small and open-market economies which development perspectives largely depend on the external economic environment, which is shaped by the policies of the major economies. Overall, the implications for the rest of the world of the United States-China confrontation are bound to be very case specific. Still, is it possible to identify several factors for which current trade tensions will have far reaching consequences. These can be summarized under five factors.

**Macroeconomic factors**

A major concern for developing countries is the unavoidable impact that ongoing trade tensions will have on global growth. Overall, the global economy remains fragile and confrontations in the area of international trade can have negative spillovers to commodities and financial markets and increase the risk of a global economic downturn. More directly, trade frictions weigh on global growth as they impose adjustment costs to international firms which would reflect upon investment decisions, profitability and productivity. In addition, the increase in uncertainty about commitments to trade rules adds to the risk of investing abroad. These factors will ultimately have negative repercussions for the growth prospects of many countries, especially small and low-income developing countries, as they are generally less resilient to unfavourable global conditions.

Another concern is stagflation - an increase in prices coupled with lower growth. Tariffs can contribute to stagnation as they can reduce efficiency due to the frictions they create while increasing inflationary pressure because some of their costs will be inevitably passed down to consumers. Given the size of the two countries directly involved, the concern is that these effects will be felt not only domestically but also abroad. While moderately higher inflation is generally not a problem if it is a result of economic growth, in periods of economic stagnation inflation often results in job losses and rising unemployment. Moreover, stagflation is difficult to tackle as conventional monetary policy is not well suited to address both high inflation and economic stagnations at the same time.
International trade patterns

Because of the size of the two economies involved, the tariffs implemented by the United States and China will inevitably have significant repercussions on international trade. The impact of tariffs on international patterns of trade depends primarily upon the extent to which United States-China trade will be substituted with products originating from other countries. Some products may not be easily substituted because of a lack of foreign competitors or because of United States/Chinese suppliers willing to absorb at least part of the additional costs due to tariffs. While this implies that even with substantial tariffs some trade will continue to occur between the two countries, while some bilateral trade will inevitably be diverted to other countries or lost due to price rises and import substitution effects.¹

Chart 3a and 3b reports the amount of trade affected by tariffs across several sectors along with estimates of trade diversion effects (imports diverted to third countries), residual trade (imports still originating from the country affected by the tariffs), and trade losses (imports that would be substituted by the domestic economy or lost due to price increases). The results factor in the further escalation to 25 per cent tariffs due to occur on March 2019. In general, the trade diversion effects tariff of 25 per cent are orders of magnitude larger than residual trade and trade losses. For example, of the about 33 billion of various machinery that United States imports from China, about 27 billion would be diverted to third countries, 4 billion would remain in Chinese firms and 2 billion would be lost or captured by United States firms. This suggests that while bilateral tariffs are not very effective in protecting domestic firms, they are very valid instruments to limit trade from the affected country.

From a third-country perspective trade diversion effects are the most relevant. One effect of United States-China tensions is to make suppliers in the rest of the world more competitive relative to United States and Chinese firms. As seen in Chart 3a and 3b, the resulting benefits can be large, especially in relation to some sectors. A substantial share of United States-China trade is therefore likely to be captured by other countries whose firms are close competitors of Chinese and United States companies.

¹ These effects can be approximated using trade elasticities. In particular, substitution elasticities (from Broda and Wein斯坦: Globalization and the gains from variety, Quarterly Journal of Economics, Volume 121, Issue 2, 2006) provide an indication on how much trade of the affected product is likely to be diverted to third country. Import demand elasticities (from Kee, Nicita and Olarreaga: Import Demand Elasticities and Trade Distortions, The Review of Economics and Statistics, Volume 9, Issue 4, 2008) can be used to estimate how much of the bilateral trade is likely to remain and how much will be lost. Finally, export supply elasticities (from Nicita, Peri and Olarreaga: Cooperation in WTO’s Tariff Waters, Journal of Political Economy, Volume 126, Issue 3, 2018) can approximate how trade diversion effects are allocated across third markets.
Chart 4 reports estimates of trade diversion effects that favour third countries exports. Overall, European Union exports are those likely to increase the most, capturing about US$ 70 billion of the United States-China bilateral trade (US$ 50 billion of Chinese exports to United States, and US$ 20 billion of United States exports to China). Japan, Mexico and Canada will capture above US$ 20 billion. Other countries would capture substantially less. Although these numbers are not very large in relation to global trade (about US$ 17 trillion in 2017), for many countries they represent a substantial share of export. For example, the about US$ 27 billion of United States-China trade that would be captured by Mexico represents about 6 per cent of Mexico exports. Substantial effects relative to the size of their exports are also expected for Australia, Brazil, India, Philippines, Pakistan and Viet Nam.

Still, while United States and Chinese tariffs can be beneficial to some foreign competitors, the overall effects would be more uncertain depending on each country’s economic structure as well as the extent to which tariffs will affect prices. A clarifying example of these dynamics is provided by Chinese tariffs imposed on United States soybeans. Because of the importance of these two markets (China accounts for more than half of global imports of soybeans and United States is the world largest soybeans producer), the tariffs on soybeans have substantially disrupted world trade of this commodity. As discussed above, one consequence of such tariffs has been a diversion of trade to favour several exporting countries, in particular Brazil which suddenly became the main supplier of soybeans to China. However, while higher price premiums have been welcomed by Brazilian producers, not everyone has been happy. One concern of Brazilian soybean producers is that higher prices brought about by the Chinese tariffs may hamper Brazilian procurers’ long term competitiveness. In a situation where the magnitude and duration of tariffs is unclear, Brazilian producers are reluctant to make investment decisions that may turn unprofitable if tariffs are revoked. Moreover, Brazilian firms operating in sectors using soybeans as inputs (e.g. feed for livestock) are bound to lose competitiveness because of higher prices due to the increase in demand for Brazilian soybeans from Chinese buyers.

**Trade policy spillovers**

One major concern is that the trade confrontations and bilateral policy actions could spread to other countries. Since trade policies implemented by large economies are bound to influence international markets, even the countries not directly involved in the confrontations often find efficient to adjust their trade policies to maximize opportunities or minimize negative spillovers. In other words, changes in trade policy in one country often create policy changes elsewhere, eventually resulting in a cascade of distortionary trade policies. Trade defence measures are of concern in the present context. One reason is that a sudden imposition of protectionist measures often induces firms to scramble for alternative buyers, therefore offering their products at below cost. This practice is generally referred to as dumping. Because of the possibility of dumping, several countries can implement trade defence policy actions to make sure that products are not finding their way into their domestic markets at below cost.

One example of the dynamics described above is the tariffs on steel and aluminium products that the United States imposed on March 2018. Those tariffs exacerbate the problem of global oversupply and consequently contributed to lower prices. To limit the possibility of dumping, several economies including the European Union, India, Canada, Turkey and South Africa have all initiated investigations within the WTO framework to implement temporary tariffs under the Agreement on Safeguards.
In more general terms, tariffs can have spillovers not only with regard to trade defence measures but also to other forms of government interventions. Countries negatively affected often implement additional policies to support affected sectors. Although these policies are generally domestic in nature, they often have important implications for international trade. For example, subsidies to agriculture and support to state owned enterprises often have important implications for many other countries, and therefore are likely to be counteracted by additional policy actions.

**Value chains**

Today patterns of trade are greatly shaped by production networks, with assembly done in one country while parts and components originate from elsewhere. In this context, the imposition of a tariff would have far reaching consequences beyond the country and sector directly targeted. The rationale is that the imposition of a tariff penalizes not only the assembler of the product, but also the suppliers along the value chain. Moreover, because international trade in goods is increasingly integrated with services, tariffs on goods can also have an impact on the service sector. In other words, whatever damages the Chinese or the United States economy will also indirectly affect suppliers of intermediate goods and services wherever they are located.

One important element to consider is the implications of tariffs for international production networks. While trade tensions between the United States and China may promote some domestic re-localization of global value chains, they will largely alter the localization of industries across countries. For example, United States tariffs on China could benefit Mexico as they may result in the relocation of some assembly lines away from China. Moreover, United States tariffs will also have negative implications for East Asian suppliers as they may find themselves unable to be competitive when other processes along the value chain move away from their region.

Chart 5 reports the effects on regional value chains consequent to 25 per cent tariffs on the affected products. The reported effects include the reallocation of assembly processes away from the United States and China as well as the effects on direct suppliers to those assembly lines. The results indicate that while both the North American and East Asian value chains will be negatively affected, East Asian value chains will shrink considerably more. Considering both United States and Chinese tariffs, trade would be reduced by about US$160 billion for East Asian regional chains. For the North American region (that is the countries in the USMCA agreement: United States, Canada and Mexico), the negative effects of Chinese tariffs will be almost entirely compensated by the reallocation of production process away from China into the USMCA area. For the North America region, the net loss is estimated at US$ 10 billion of trade. One reason for such disparity is the larger amount of trade affected by United States tariffs, as well as the fact that a large number of United States tariffs are targeted to intermediate products. Negative effects in East Asia and North America will benefit other countries, in particular the European Union. It is estimated that the European Union will be able to attract about US$ 90 billion of trade related to value chains. Other Asian countries and South American countries would also attract some trade related to value chains, while Africa much less so.

Of importance from a global value chain perspective is also whether tariffs are temporary or intended to stay. If tariffs are perceived as temporary their effects on global value chains may not be large as there

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2 The methodology follows the one described above using trade elasticities, but also considering the share of intermediate products in each sector, and its origin.
are substantial costs in moving producing processes around the world. However, if tariffs are perceived to be permanent they affect investment decisions, and therefore tariffs may have a much longer lasting effects, which are likely to persist even if tariffs are removed.

**Effects on the trading system**

The ongoing trade tensions not only have implications for the global economy, but more so for the rules governing it. The very fact that negotiations and settlements on ongoing trade confrontations are taking place at a bilateral level rather than within the domain of the WTO denotes the weakening of the multilateral trading system. Although the multilateral rules governing international trade are far from perfect and need reform, the rapid weakening of the existing framework can have large repercussions for many developing countries. In a context where countries are becoming more attentive to national and socio-economic outcomes rather than to multilateral cooperation and development assistance, it is unclear whether rewriting global trade rules may produce a more positive outcome for smaller and low-income countries. For example, any new trade policy could become a major concern for developing countries if the policy would not be obliging to the principles of special and differential treatment associated with the present multilateral trading system.

Another aspect is that the weakening of the global trade system may further advance regional and bilateral trade integration initiatives. Although this is not necessarily a negative outcome, such initiatives often give more leverage to economically powerful countries. Moreover, regional integration could exacerbate regulatory differences among trading blocks. Regional trade rules would likely become entrenched, reducing incentives to craft global trade rules. Direct implications for developing countries could result in hub and spoke frameworks with less value addition and fewer options for trade diversification.

As a final remark, it is important to remember the fundamental concerns lying behind the ongoing trade tensions. The current trade confrontations reflect disagreements in the areas of intellectual property rights, government subsidies, and many other types of non-tariff barriers affecting market access. Trade rules governing these areas are being rethought, wrangled, and likely to be rewritten. Whether these rules would favour a supportive global environment remains to be seen. What is sure is that these rules will have great importance for the development perspectives of many developing countries.
1. TARIFFS

Tariffs have remained essentially stable since 2008. Developed countries import restrictiveness is about 1.5 per cent. Although generally declining, import restrictiveness remained relatively high in developing countries, especially in South Asia and sub-Saharan Africa. Exporters in East and South Asia face the highest tariffs. For transition economies import restrictiveness declined, while export restrictiveness increased.

**Figure 1**
Average import and export restrictiveness, by region

![Import Restrictiveness (TTRI)](chart)

<table>
<thead>
<tr>
<th>Region</th>
<th>Import Restrictiveness (TTRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed countries</td>
<td>2008: 4, 2016: 4, 2017: 4</td>
</tr>
<tr>
<td>East Asia</td>
<td>2008: 4, 2016: 4, 2017: 4</td>
</tr>
<tr>
<td>Latin America</td>
<td>2008: 4, 2016: 4, 2017: 4</td>
</tr>
<tr>
<td>South Asia</td>
<td>2008: 4, 2016: 4, 2017: 4</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>2008: 4, 2016: 4, 2017: 4</td>
</tr>
</tbody>
</table>

![Export Restrictiveness (MA-TTRI)](chart)

<table>
<thead>
<tr>
<th>Region</th>
<th>Export Restrictiveness (MA-TTRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed countries</td>
<td>2008: 3, 2015: 2, 2017: 3</td>
</tr>
<tr>
<td>East Asia</td>
<td>2008: 3, 2015: 2, 2017: 3</td>
</tr>
<tr>
<td>Latin America</td>
<td>2008: 3, 2015: 2, 2017: 3</td>
</tr>
<tr>
<td>South Asia</td>
<td>2008: 3, 2015: 2, 2017: 3</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>2008: 3, 2015: 2, 2017: 3</td>
</tr>
<tr>
<td>Transition economies</td>
<td>2008: 3, 2015: 2, 2017: 3</td>
</tr>
</tbody>
</table>

Source: UNCTAD secretariat calculations based on COMTRADE data and UNCTAD TRAINS data.

Figure 1a portrays the tariff trade restrictiveness index (TTRI), which measures the average level of tariff restrictions imposed on imports. The index is weighed so as to control for different import values and import demand elasticities. The market access counterpart (MA-TTRI) summarizes the tariff restrictiveness faced by exports (Figure 1b). Both indices are calculated on the basis of applied tariffs (ad valorem and specific tariffs), including tariff preferences. Multilateral and unilateral liberalization contributed to the decline of tariff restrictions during the last decade. Nevertheless, despite a continuing declining trend, the tariff liberalization process has largely stalled since 2008. In 2017, tariff restrictiveness was still substantially higher in developing countries than in developed countries. Among developing countries, import restrictiveness is highest in South Asia and sub-Saharan Africa.

In terms of export restrictiveness, transition economies and sub-Saharan African countries faced the most liberal market access conditions with an MA-TTRI of about 1.5 per cent in 2017. This was largely due to unilateral preferences granted by developed countries and an export composition tilted towards natural resources that typically face low tariffs. In contrast, exports from East and South Asia faced a higher average level of restrictiveness, about 3.5 per cent. For many countries in these regions, trade liberalization in major trading partners aimed at lowering tariffs can still produce substantial export gains.
Since 2008, tariffs have somewhat declined on a multilateral and preferential basis. World trade in agriculture and natural resources has been liberalized both through most-favoured-nation (MFN) treatment and more widespread preferential access. In regard to manufacturing, liberalization has occurred mainly through preferential access.

Figure 2
Multilateral and preferential tariff liberalization

Source: UNCTAD secretariat calculations based on COMTRADE data and UNCTAD TRAINS data.

Figure 2a and 2b illustrate average MFN and preferential tariffs for 2008 and 2017 in three main sectors. For agriculture, the decline in tariffs that has occurred since 2008 is the result of both MFN and preferential liberalization. Simple average MFN tariffs in agricultural products have declined by about 2 percentage points since 2008, and trade-weighted averages by more than 3 percentage points. Preferential liberalization has contributed another 2 percentage points to the reduction of simple agricultural tariffs, and much less on a trade weighted basis. In regard to manufacturing, MFN tariffs have remained largely stable. The proliferation of preferential schemes has resulted in relatively larger reductions in this sector, amounting to about 1 percentage point. Still, a shift in trade composition towards products affected by higher tariffs has tilted the average preferential tariff for manufacturing to about 2.5 per cent. Liberalization both in MFN and preferential terms has also occurred in natural resource trade, further reducing the already low levels of tariffs in this sector.
Although to a lower extent than in 2008, international trade continues to be largely free from tariffs both as a result of zero MFN duties and because of duty-free preferential access. However, tariffs applied to the remainder of international trade can be high. Preferential access continues to play a key role for agricultural market access, but also remain significant for manufacturing products.

**Figure 3**
Free trade and remaining tariffs, by broad category

(a) Duty Free Trade

<table>
<thead>
<tr>
<th></th>
<th>MFN</th>
<th>Preferential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture 2008</td>
<td>50%</td>
<td>60%</td>
</tr>
<tr>
<td>Agriculture 2017</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Manufacturing 2008</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Manufacturing 2017</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Natural resources 2008</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>Natural resources 2017</td>
<td>20%</td>
<td>30%</td>
</tr>
</tbody>
</table>

(b) Average Tariff on Non-Free Trade

<table>
<thead>
<tr>
<th></th>
<th>Simple average</th>
<th>Trade weighted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Natural resources</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: UNCTAD secretariat calculations based on COMTRADE data and UNCTAD TRAINS data.

International trade has been largely liberalized owing to both zero MFN tariffs as well as preferential duty-free access. Although to a lower extent than in 2008, a substantial part of world trade continues to be free from tariffs (Figure 3a). Still, tariffs applied to the remainder of international trade are often high (Figure 3b). Importantly, there are differences between agriculture, manufacturing and natural resources. Agricultural trade is free from tariffs largely due to preferential access (as opposed to zero MFN tariffs). In this regard, preferential access and reciprocal concessions continue to play a key role for agricultural market access, as the remaining tariffs are fairly high (averaging almost 20 per cent). Preferential access is also important for manufacturing products, for which the simple average tariff is at almost 10 per cent. On the other hand, preferential access is of limited importance in the case of natural resources, as trade in this category is largely tariff-free under MFN rates, and remaining tariffs are generally very low (on average about 6 per cent).
Low average tariffs mask large differences across economic categories and product sectors. In general, international trade in agriculture is taxed at a much higher rate than trade in manufacturing and natural resources. Tariffs also remain relatively high for manufacturing products, such as textiles and apparel, which are important for developing countries.

Figure 4
Trade weighted average tariffs, by region, broad category and sector

Figure 4 (a, b) depicts the trade weighted average tariff for broad as well as specific categories of products. Tariff restrictions remain quite different across geographic regions and economic sectors. In general, international trade in agriculture is taxed at a much higher rate than trade in manufacturing and natural resources. Even within agriculture, tariffs vary greatly across geographic regions. South Asian and East Asian countries and transition economies tend to apply relatively high tariffs in agriculture, while such tariffs are on average much lower in Latin American and developed countries. Manufacturing tariffs remain high only in the South Asian region (almost 10 per cent on average), and in sub-Saharan Africa (about 7 per cent on average). Average tariffs vary greatly across product sectors, ranging from about 8 per cent for vegetable products to almost zero for fuels, ores and office machineries. Even considering all concessions and preferential schemes, international trade is subject to high tariffs not only in relation to agricultural products but also in the case of manufacturing products of importance for developing countries such as textiles (almost 5 per cent) and apparel (almost 7 per cent). Finally, although tariffs have been declining in most sectors, they have increased in others. Nonetheless, the trend of increasing tariffs has been limited to a number of cases (for example, rise in tariffs on vegetable oils in South Asia).
Amid generally low tariffs, there are a significant number of products where tariffs are relatively high. Tariff peaks are part of the tariff structures of many developing and developed countries. Tariff peaks tend to be concentrated in products of interest to low income countries, such as agriculture as well as apparel, textiles and tanning.

In view of generally low tariffs, and even when all concessions such as unilateral and reciprocal preferential schemes are taken into account, there remain a significant number of products for which tariffs are relatively high. These high tariffs (above 15 per cent) are generally referred to as tariff peaks and are usually levied on sensitive products. Tariff peaks appear in the tariff structure of many developing countries, but with different patterns. For example, tariff peaks are a large part of the tariff structure of agricultural products of developing countries in South Asia and sub-Saharan Africa, but this is not the case in the transition economies (Figure 5a). Tariff peaks tend to be less prevalent in manufacturing, especially in natural resources. They tend to be concentrated in products of interest to low income countries, such as most agricultural sectors, but also apparel, textiles and tanning. For example, tariffs on about 10 per cent of international trade in food products (and 25 per cent of the products in this group) are higher than 15 per cent (Figure 5b). Similarly, about 10 per cent of international trade in apparel is subject to a tariff of 15 per cent or more.
Tariff escalation remains a feature of the tariff regimes of both developed and developing countries. It is more pervasive in manufacturing products than in agriculture. Tariff escalation is prevalent in most sectors, including those of importance (e.g. apparel) to developing countries.

Figure 6
Tariff escalation by region, broad category and sector (2017)

Tariff escalation – the practice of imposing higher tariffs on consumer (finished) products than on intermediates and raw materials – is present in the tariff structure of many countries. This practice favours processing industries closer to consumers, while discouraging the undertaking of processing activities in countries where raw materials originate. Most developing and developed countries adopt escalating tariff structures, but to varying degrees. Tariff escalation is more pervasive in manufacturing products than in agriculture (Figure 6a). Indeed, the tariff structure of countries in South Asia, West Asia and North Africa is not escalating in the agricultural sector. Otherwise, tariff escalation is prevalent in most sectors, including those of importance to developing countries: apparel, animal products, tanning and many light manufacturing sectors (Figure 6b).

Source: UNCTAD secretariat calculations based on COMTRADE data and UNCTAD TRAINS data.
The pattern of trade restrictiveness varies greatly among regional trade flows. Intraregional trade is generally subject to lower TTRI than interregional trade. A large number of South–South regional trade flows are still burdened by relatively high tariffs. The tariff liberalization process of the past five years is reflected in lower tariffs for most intra- and inter-regional flows.

Table 1
Tariff restrictiveness, matrix by region (percentage), 2017

<table>
<thead>
<tr>
<th>Importing Region</th>
<th>Developed Countries</th>
<th>East Asia</th>
<th>Latin America</th>
<th>South Asia</th>
<th>Sub-Saharan Africa</th>
<th>Transition Economies</th>
<th>W.Asia &amp; N.Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed Countries</td>
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<td>2.6</td>
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<td>2.1</td>
<td>0.4</td>
<td>1.7</td>
<td>0.6</td>
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<tr>
<td>East Asia</td>
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<td>3.2</td>
<td>1.7</td>
<td>3.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Latin America</td>
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<td>8.0</td>
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<td>10.9</td>
<td>1.9</td>
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<td>2.9</td>
</tr>
<tr>
<td>South Asia</td>
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</tr>
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<td>Sub-Saharan Africa</td>
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</tr>
<tr>
<td>Transition Economies</td>
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<td>4.0</td>
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<tr>
<td>W.Asia &amp; N.Africa</td>
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<td>4.0</td>
<td>2.6</td>
<td>8.7</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Note: Changes between 2008 and 2017 are shown in a smaller font.

Table 1 represents a matrix of the average levels of tariffs imposed on trade flows between regions in 2017. Differences in the rates exhibited in the table arise from different patterns of both market access and trade composition. The effect of regional trade agreements is reflected in the relatively lower degree of restrictiveness on intraregional compared with interregional trade. However, this is not the case for exports from sub-Saharan Africa and South Asia countries, for which market access is often better for interregional trade than for intraregional trade. This is partly due to preferences granted to LDCs, but also owing to the tariff barriers imposed by sub-Saharan African countries on trade among each other. A large number of South–South trade flows are still burdened by relatively high tariffs. For example, exports from Latin American countries to the South Asian region face a tariff of almost 18 per cent. Trade flows between many regions have been liberalized over the past five years as a result of an increasingly diverse geographic pattern of regional trade agreements. However, some interregional trade flows have also become subject to higher tariffs. The latter phenomenon is mainly caused by a shifting composition of trade flows (as opposed to an increase in tariffs on particular product lines).
The system of tariff preferences affects international competitiveness by providing various countries with different market access conditions. Because trade agreements are often regional, the system of preferences tends to favour regional trade over interregional trade. Still, the magnitude of the effect of preferences differs widely across regions. Latin American countries enjoy the highest preferential margins in trading with regional partners, estimated at about 4.3 percentage points.

Table 2
Relative preferential margins, matrix by region (percentage), 2017

<table>
<thead>
<tr>
<th>Importing Region</th>
<th>Developed Countries</th>
<th>East Asia</th>
<th>Latin America</th>
<th>South Asia</th>
<th>Sub-Saharan Africa</th>
<th>Transition Economies</th>
<th>W.Asia &amp; N.Africa</th>
</tr>
</thead>
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<tr>
<td>Developed Countries</td>
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<td>0.3</td>
<td>-0.6</td>
<td>0.2</td>
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<td>0.1</td>
<td>-0.3</td>
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<td>1.1</td>
<td>0.1</td>
<td>-0.5</td>
<td>0.0</td>
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<tr>
<td>East Asia</td>
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<td>-0.4</td>
</tr>
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<td>-0.2</td>
<td>-0.6</td>
<td>-0.3</td>
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<tr>
<td>Latin America</td>
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<td>-4.2</td>
<td>-0.8</td>
<td>-1.2</td>
<td>-0.7</td>
</tr>
<tr>
<td></td>
<td>-0.7</td>
<td>1.1</td>
<td>-0.1</td>
<td>-1.4</td>
<td>0.0</td>
<td>-0.8</td>
<td>0.3</td>
</tr>
<tr>
<td>South Asia</td>
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<td>0.2</td>
<td>0.1</td>
<td>2.0</td>
<td>-0.2</td>
<td>-0.1</td>
<td>-0.1</td>
</tr>
<tr>
<td></td>
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<td>0.1</td>
<td>0.5</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>0.3</td>
<td>-1.0</td>
<td>-1.4</td>
<td>-1.1</td>
<td>4.4</td>
<td>-0.5</td>
<td>-0.2</td>
</tr>
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<td></td>
<td>0.7</td>
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<tr>
<td>Transition Economies</td>
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<tr>
<td>W.Asia &amp; N.Africa</td>
<td>0.3</td>
<td>-1.3</td>
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<td>-0.1</td>
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<td>-0.8</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

Note: Changes between 2008 and 2017 are shown in a smaller font.

Table 2 reports relative preferential margins (RPMs) calculated at the regional level for 2017 and their changes since 2008. RPMs provide a measure of the average preferential margin for a given country by taking into consideration any preference provided by its trading partners to foreign competitors. RPMs can be positive or negative, depending on the advantage or disadvantage a country has in terms of preferences with respect to other competing exporters. The RPM is exactly zero when there is no discrimination; it is largest for Latin American countries, which enjoy about a 4.3 percentage point advantage on foreign competitors when trading within their region. On the other hand, the system of preferences provides only about 0.5 percentage points advantage to East Asian countries trading in their own region. With very few exceptions, interregional trade faces a negative RPM, suggesting that the tariff structure negatively impacts non-regional exporters’ competitiveness. The least favoured are exporters of South Asia and East Asia seeking to trade with Latin America. For sub-Saharan exporters, the effects of the system of preferences for interregional trade are often negligible.
Import restrictiveness differs substantially across countries, and even within the same region. Preferential schemes allow LDCs to enjoy duty free access to many developed country markets. However, developing country exports, especially those in Eastern Asia, Latin America and East Africa, still face relatively high tariffs.

Figure 7
Import restrictiveness

(a) Import restrictiveness (2017)

(b) Export restrictiveness (2017)

Source: UNCTAD secretariat calculations based on COMTRADE and UNCTAD TRAINS data.

Figure 7a illustrates the average level of tariff restrictions imposed on imports (as measured by the TTRI). The level of tariffs differs substantially across countries, and even within the same region. Figure 7b reports the overall level of tariff restrictions faced by exporters (as measured by the MA-TTRI). Many Latin American countries face high tariffs because a large share of their exports consists of agricultural products. Due to export composition, and also because of limited preferential rates, Chinese exports face tariffs similar to those of many other developing countries.
2. TRADE AGREEMENTS

The international trading system is regulated by an increasing number of preferential trade agreements (PTAs). Most of the recent trade agreements address not only goods but also services, and deal with rules beyond reciprocal tariff concessions. The percentage of trade within PTAs has continued to increase. In 2017, about 50 per cent of world trade was taking place between countries that had signed a PTA, and one third was regulated by deep trade agreements.

Figure 8  
Trade agreements

Figure 8a illustrates the number of PTAs that have been in force in each year since 2005. The number of PTAs in force has approximately doubled from less than 150 in 2005 to more than 300 in 2017. This upward trend is likely to continue, as additional PTAs are still in the negotiation phase and likely to be implemented in the next few years. About half of all trade agreements in force go beyond tariff concessions, to cover services and behind-the-border measures. Although the number of PTAs has increased dramatically, the percentage of trade taking place under PTAs has not increased as much (Figure 8b). Still, even without considering trade within the European Union, about one third of world trade took place under deep trade agreements (i.e. those with trade rules going beyond traditional tariffs and existing WTO agreements, to cover deeper behind-the-border measures) in 2017. Almost 10 per cent of world trade was covered by trade agreements limited to preferential access, and about 7 per cent was under unilateral preferences such as the ones provided by developed countries to LDCs.
The importance of trade agreements is high for many developed countries, but not as much for the majority of developing countries; notable exceptions include a number of countries in South East Asia, Southern Africa and Latin America.

A large share of international trade of many developed countries occurs under some form of PTA, and in many cases under trade rules going beyond traditional reciprocal market access concessions. For countries of the European Union, more than 75 per cent of trade occurs under some form of PTA (Figure 9a), and more than 50 per cent under deep agreements (i.e. those with trade rules going beyond traditional tariffs and existing WTO agreements, to cover deeper behind-the-border measures) (Figure 9b). However, most developing countries’ trade still occurs outside PTA rules, with notable exceptions in some countries of South-East Asia, Southern Africa and Latin America.
Trade agreements result in different degrees of policy space across countries. Developed countries and economies in transition tend to have very limited policy space, as most tariff lines are bound by WTO obligations with little tariff water. Policy space within WTO is for lower-income countries in general. Once PTAs are accounted for, a substantial amount of trade is locked under preferential tariffs, which in turn means that the amount of “true” tariff water in many cases is less than half of the WTO binding overhang.

Figure 10
Policy space: Multilateral constraints

(a) Tariff water (2017)

(b) True tariff water (2017)

Figure 10a portrays the average tariff water (trade weighed) calculated as the difference between WTO bound tariffs and applied MFN tariffs. Policy space within WTO is greater for developing countries, especially those of lower income status. Figure 10b portrays the average tariff water calculated as the difference between bound and applied tariffs, taking into account the implicit bindings imposed by both WTO and PTA commitments. Countries that have a large share of trade under preferential commitments and/or have low true tariff water cannot raise their tariffs without infringing WTO or PTA commitments.

3 The difference between the tariff that a country applies at the border and the country’s commitments to other WTO members is referred to as “tariff water”, or “binding overhang”. In principle, tariff waters provide the policy space for country to set their tariff at non-cooperative levels.
3. NON-TARIFF MEASURES

Non-tariff measures include a diverse array of policy measures serving different purposes. Among the various types of non-tariff measures, technical barriers are the most pervasive, as the majority of international trade is regulated by some form of technical barrier. Quantity and price control measures cover a much smaller, but still significant, share of world trade. Export measures cover a significant part of world trade.

Figure 11
Prevalence of non-tariff measures, by type and broad category (2017)

Data on non-tariff measures (NTMs) is still fragmentary and therefore does not allow computation of comparative statistics across countries. Although the data may also not be fully representative of world trade, some preliminary statistics can be derived from the available data. Figure 11a illustrates the distribution of NTMs across broad categories. For each category, both the frequency index (i.e. the percentage of HS 6 digit lines covered) and coverage ratio (i.e. the percentage of trade affected) are reported. International trade is highly regulated through the imposition of Technical barriers to Trade (TBT) with more than 30 per cent of product lines and almost 70 per cent of world trade affected. Price control measures affect about 15 per cent of world trade. SPS affect almost 20 per cent of world trade. Export measures are also frequently applied to international trade, still their use is largely related to agriculture. Coverage of NTMs by broad category (Figure 11b), shows that agriculture is the most affected, with most of world agricultural trade subject to forms of SPS and TBT.
The prevalence of various types of non-tariff measures differs by economic sectors. Sectors related to agriculture tend to be regulated by SPS and export measures. TBT are used to regulate most economic sectors. Quantity and price measures although used in many sectors cover only much smaller percentage of trade.

SPS measures are typically applied to agricultural products, and to other products that may have inherent health hazards due to contaminants (Figure 12a). TBT are widely used to regulate international trade in most sectors and concern the vast majority of world trade flows (Figure 12b). Quantity and price control measures are widely applied to many sectors. They cover a large share of world trade in regard to agricultural related products (Figure 12c). Finally, agricultural sectors as well as petroleum products and chemicals are generally affected by export measures (Figure 12d).
The regulatory framework related to technical non-tariff measures (SPS and TBT) differs across countries. The use of technical measures tends to be more pervasive in the European Union, China, Brazil and Australia and less so in many low-income countries. Developed countries’ use of technical non-tariff measures tends to be more targeted to specific products. This applies also to China and Brazil. Other developing countries tend to use technical non-tariff measures in a more homogenous manner.

The use of technical NTMs differs across countries. To capture the diverse use of non-technical measures across countries Figure 13a illustrates an intensity. This index is computed by calculating the difference between the number of non-technical measures applied by a given country in each product and the average number of measures applied to that product. Then, country averages are computed by weighing each product by its importance in world trade. Figure 13b reports the standard deviation of product level differences within each country. This illustrates whether non-technical measures tend to be uniformly applied across products or are applied with different intensity across products.
4. TRADE DEFENCE MEASURES

The use of trade defence measures remained strong in 2017 with about 300 new investigations started at the WTO. Cumulatively, there were more than 1,500 instances involving trade defence measures in effect in 2017. During the last decade, developing countries have become increasingly more active users of trade defence measures.

Figure 14
Trade defence measures, 2005-2017

Trade defence measures in the form of antidumping, countervailing duties and safeguards allow countries to actively respond to import-related concerns within an established WTO mechanism. During the past decade, between 150 and 250 antidumping cases were brought annually before WTO (Figure 14a). However, the number of antidumping cases brought to WTO increased in 2016 and 2017 with about 300 new cases per year. Generally, trade defence measures remain in effect for five years and sometimes more, and therefore the stock of measures affecting trade in any given year is significantly higher than the corresponding number of new cases each year. As of 2017, there were about 1700 trade defence measures in effect (in general, specific or ad valorem duty) (Figure 14b). Both developed and developing countries make use of trade defence measures. Still, developing countries have become increasingly more active users of trade defence measures.

Source: UNCTAD secretariat calculations based on WTO I-TIP data.
The use and impact of trade defence measures vary greatly across countries. Trade defence measures are imposed mainly by developed and emerging economies, and are largely targeted against products originating from China, the European Union and the United States.

**Figure 15**
Trade defence measures in effect, by country

(a) Trade defence measures in effect, by imposing country (2017)

(b) Trade defence measures in effect, by targeted country (2017)

Source: UNCTAD secretariat calculations based on WTO I-TIP data.

Most cases relating to trade defence measures are brought to WTO by major economies. The main users of such measures include India, the United States, the European Union, China and, more recently, Turkey, Brazil and Argentina (Figure 15a). China is by far the most targeted country with more than 400 measures in effect as of 2017 (Figure 15b). A large number of trade defence measures are also imposed against the European Union, the United States and India.
5. Exchange Rates

As measured by the real effective exchange rate, changes in external competitiveness have been diverse across countries. In comparison with 2010 competitiveness in the United States and China has declined, while that of the European Union and Japan has increased. In 2017, external competitiveness of most countries has been stable, with the exception of Brazil, the Russian Federation and South Africa for which it declined.

Figure 16
International competitiveness, real effective exchange rate

(a) REER changes between 2010 and 2017

(b) REER changes between 2016 and 2017

The real effective exchange rate (REER) is a measure of the trade-weighted average exchange rate of a currency against a basket of currencies after adjusting for inflation differentials (consumer price index). It measures external competitiveness. In general, an appreciation in the REER results in a loss of competitiveness, while a decline in the REER indicates an increase in external competitiveness.
Movements in the nominal exchange rates versus the dollar can play an important role in determining the competitiveness of countries. Since 2010, with the notable exception of China, most currencies depreciated against the dollar, sometimes substantially. The value of the United States dollar remained stable against most currencies in 2017.

Figure 17
Change in the nominal exchange rate vs United States dollar

(a) Exchange rates changes vs United States dollar (2010-2017)

(b) Exchange rates changes vs United States dollar (2016-2017)

As international trade transactions are generally in dollars, appreciation and depreciations against the dollar can play a substantial role in the competitiveness of countries. Figures 18a and 18b portray the yearly average percentage change in nominal exchange rates of world currencies against the dollar between 2010 and 2017, and between 2017 and 2017, respectively (annual average).