



World Economic Situation and Prospects

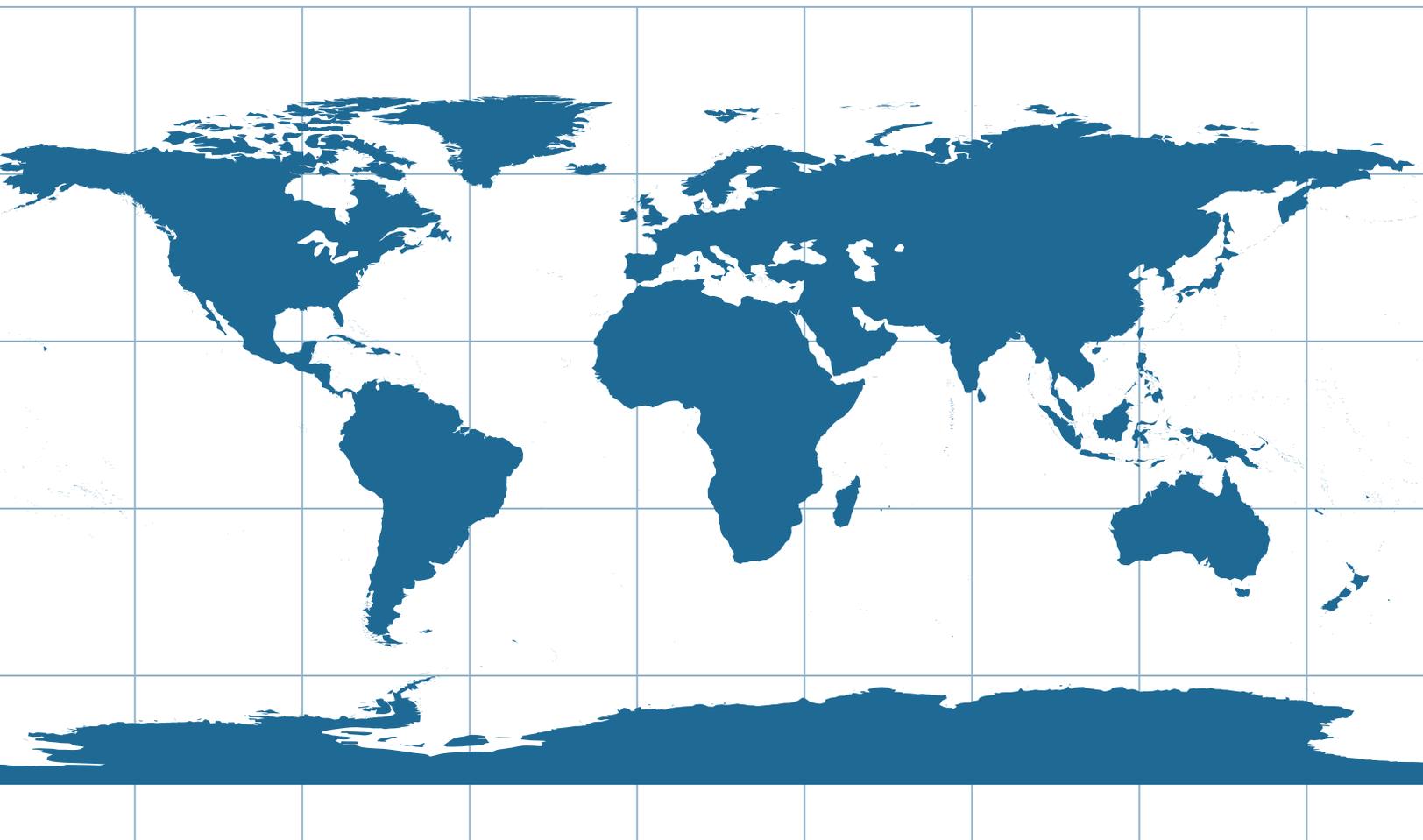


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Chapter II

Macroeconomic prospects and the implementation of the 2030 Agenda for Sustainable Development

In tandem with the solid global growth performance over the past two years, countries have continued to advance efforts towards attainment of the Sustainable Development Goals (SDGs). Three years into the implementation of the 2030 Agenda for Sustainable Development, many countries are in the process of aligning their national development plans and strategies with the SDGs. At the 2018 High-level Political Forum (HLPF), 47 countries presented their voluntary national reviews (VNRs), which took stock of their achievements and challenges, as well as identified the next steps in implementing the Agenda.

Nevertheless, for most countries, the pace of progress has not been rapid enough to keep up with the ambitions of the Agenda. The *Sustainable Development Goals Report 2018* highlighted that countries continue to face daunting challenges to the successful transition towards more sustainable and resilient societies by 2030 (United Nations, 2018b). While global economic conditions have remained strong since 2017, a large number of developing countries are struggling to achieve sustained growth in per capita incomes and productivity. Moreover, even within countries that are expanding at a strong pace or have reached high standards of living, there are marginalized and disadvantaged groups that are not benefiting from improved economic conditions. Rising inequalities, conflict and climate change pose additional challenges, contributing to growing numbers of people facing hunger and displacement in several parts of the world.

Several of these challenges will be at the heart of discussions in the upcoming sessions of the HLPF, under the auspices of the Economic and Social Council (ECOSOC) in July 2019 and at the Heads of State level during the General Assembly in September 2019 under the theme “Empowering people and ensuring inclusiveness and equality”. During this forum, six out of the seventeen SDGs will be reviewed in depth, many of which are strongly linked to the current macroeconomic conditions. These include Goal 8 on economic growth and productive employment, Goal 10 on reducing inequality, Goal 13 on combating climate change, and Goal 17 on revitalizing global partnerships.¹

Several of the SDGs are also global by nature and require collective and cooperative action. In today’s closely integrated world economy, internationally agreed rules and institutions are vital for ensuring smoothly functioning markets, resolving disagreements and preserving stability. Strengthening multilateralism is therefore an indispensable element needed to advance sustainable development across the globe. What is required is a more inclusive, flexible and responsive multilateral system that helps tackle existing and emerging global challenges.

Global progress on the SDGs is not keeping pace with the ambitions of the 2030 Agenda for Sustainable Development

Several of the goals to be reviewed at HLPF 2019 are strongly linked to current macroeconomic conditions

Strengthening multilateralism is indispensable for advancing sustainable development

¹ The other two Sustainable Development Goals (SDGs) to be reviewed at the 2019 High-level Political Forum on Sustainable Development (HLPF) are Goal 4 on inclusive and equitable quality education and Goal 16 on peaceful and inclusive societies.

In recent years, however, support for a multilateral approach to global policymaking has been waning. The global financial crisis of 2008/09 and the subsequent slow economic recovery have put the spotlight on some of the unintended consequences of trade and financial liberalization.² There has been a growing perception that the benefits of globalization have not been equitably shared—both across and within countries.³ Many of the rules adopted to promote free trade have not created a system that is inclusive, transparent and development friendly. Trade and financial liberalization are now more widely seen as exacerbating income and wealth inequality within countries, limiting policy space and, in some cases, even undermining national sovereignty. As the backlash against globalization gained momentum and an increasing number of countries adopted more inward-looking policies, the institutions at the heart of global governance have been facing increased pressure.

As macroeconomic trends have significant implications for the implementation of the 2030 Agenda for Sustainable Development, this chapter is intended to analyse the interlinkages between a few selected macroeconomic issues and the achievement of the SDGs, organized in two parts.

The first part is focused on the greater-than-ever need for international cooperation and multilateral solutions in order to achieve shared goals in the three main areas of sustainable development: international trade, international finance and climate change.

The second part is focused on a few domestic structural challenges that are perceived as major obstacles to the achievement of the SDGs for many countries, namely, excessive dependence on commodities with volatile prices and persistently high levels of inequality.

Strengthening international cooperation and multilateralism

International trade policy

Trade tensions escalated in 2018, posing a threat to growth in international trade and output as well as to the very foundations of the rules-based multilateral trading system (MTS). As discussed in chapter I, the United States has implemented a series of unilateral measures in the form of tariff hikes since early 2018, triggering retaliatory measures by affected countries. This development is unprecedented in the history of the contemporary international trading system, where unilateral measures are precluded except under exceptional circumstances.

Rising trade tensions and the multilateral trading system

The ongoing trade disputes have created tremendous uncertainty over the evolution of the international trading system. Systemically, a spiral of unilateral trade barriers and retaliations goes directly against the very spirit of multilateral cooperation and challenges the integrity of the MTS. Furthermore, in heightened trade tensions, there are no winners, but only losers, especially among developing countries, while in bilateral negotiations the dominant trading partner tends to gain the most (Alschner et al., 2017). Thus, a move away from multilateral agreements is likely to herald less-favourable arrangements for small de-

There are significant uncertainties over the international trading system

² Before the global financial crisis, trade and financial liberalization—and globalization, more generally—had already been criticized for being unfair to developing countries (see, for example, Stiglitz, 2002).

³ Globalization is defined here as the integration of countries through increased flows of trade, capital, technology, ideas and peoples.

veloping countries. Strengthening multilateralism and international cooperation is crucial in supporting least developed countries (LDCs) in their pursuit of strong and sustained export growth (see box II.1 that discusses SDG target 17.11 on doubling the LDC share of global exports).

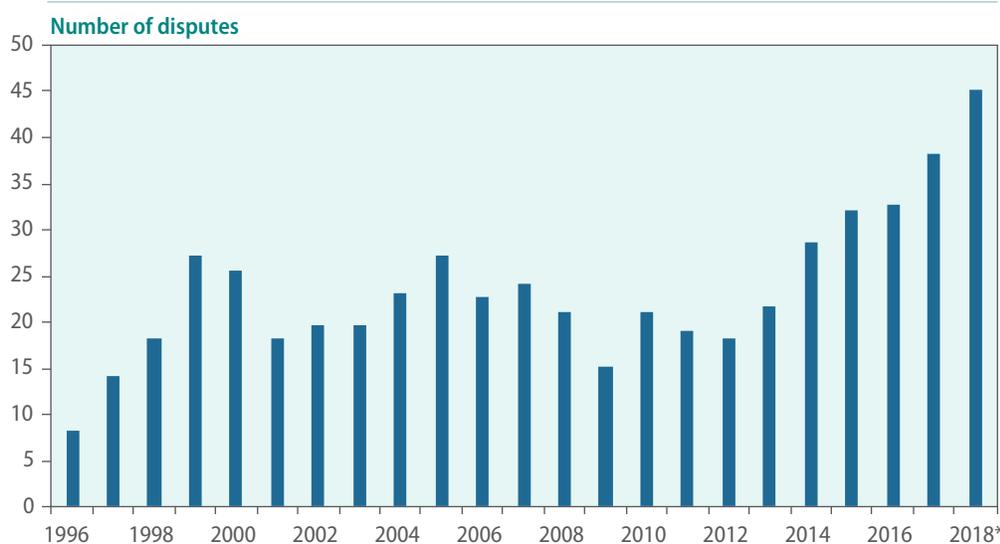
The unilateral measures and countermeasures represent a major challenge to the rules-based MTS. In the current context of trade tensions, some 27 cases (as of November 2018) were brought to the World Trade Organization (WTO) dispute settlement mechanism (DSM).⁴ Figure II.1 shows that the total number of active trade disputes has been rising in recent years. This demonstrates the continued legitimacy and authority enjoyed by the system underpinning the rules-based MTS. On the other hand, adjudication of complex and large-scale cases could confront the DSM with significant challenges. These measures raise difficult legal questions of a systemic nature, and how the cases are handled could have wider institutional implications.

The rules-based MTS requires an effective enforcement system. This role is assured by the WTO DSM, which, unlike many other international courts, guarantees automaticity in panel proceedings and remedial actions through suspension of trade concessions in case of non-compliance. This system has been widely used by WTO members. Since its establishment in 1995, the DSM has received 572 requests for consultations. It has facilitated amicable resolution of disputes, and when they reach litigation stage, compliance to rulings has been secured in 90 per cent of the cases. However, the process can be lengthy, as the DSM cannot prevent the parties involved in the dispute from maintaining disputed measures until all procedural requirements, including review by the Appellate Body, are completed. This can take several years. Implementation of rulings in some complex cases by large countries has proven to be difficult in the past.

Unilateral measures and countermeasures pose a challenge to the multilateral trading system

The dispute settlement mechanism ensures enforcement and compliance of the rules-based MTS...

Figure II.1
Total number of active trade disputes, 1996–2018



Source: World Trade Organization (WTO).

Notes: Several disputes are counted as one if they deal with the same subject matter. Data for 2018 are UN/DESA estimates based on information up to 28 September 2018.

⁴ These include cases raised against the US Section 232 tariff measures on steel and aluminum by China, India, Canada, Mexico, Norway, the Russian Federation, Switzerland, Turkey and the European Union (EU); by the United States of America against the countermeasures to the US Section 232 tariffs taken by Canada, China, Mexico, the Russian Federation, Turkey and the EU; against US safeguard measures on washing machines by the Republic of Korea and on solar panels by China and the Republic of Korea; against China's measures affecting intellectual property rights by the United States and transfer of technology by the EU, and against US Section 301 tariffs by China.

Box II.1

Strengthening multilateralism and international cooperation to achieve SDG target 17.11

Doubling the global share of least developed countries' (LDC) exports by 2020 (Sustainable Development Goals (SDGs) target 17.11) remains elusive. As of 2017, the share of merchandise trade not only remained well under the 2.06 per cent target, but has remained below the 2011 benchmark year value since 2013 (figure II.1.1). Similarly, the LDC share in global services exports remains broadly unchanged at about 0.7 per cent. The fall in merchandise trade share was mainly driven by declining LDC export prices: export volume grew by about the same rate as total global trade while prices declined by 6 per cent annually.

Several obstacles are impeding the progress towards the SDG target, including the high degree of export concentration in low value added activities, insufficient resources to support structural transformations, and barriers to market access. For example, top 10 goods account for 61.8 per cent of merchandise exports of the LDCs in 2017—more than double the world average.^a Moreover, primary and resource based manufactured goods account for 58.8 per cent while low technology products capture 29 per cent of exports—again, about twice the global average.^b

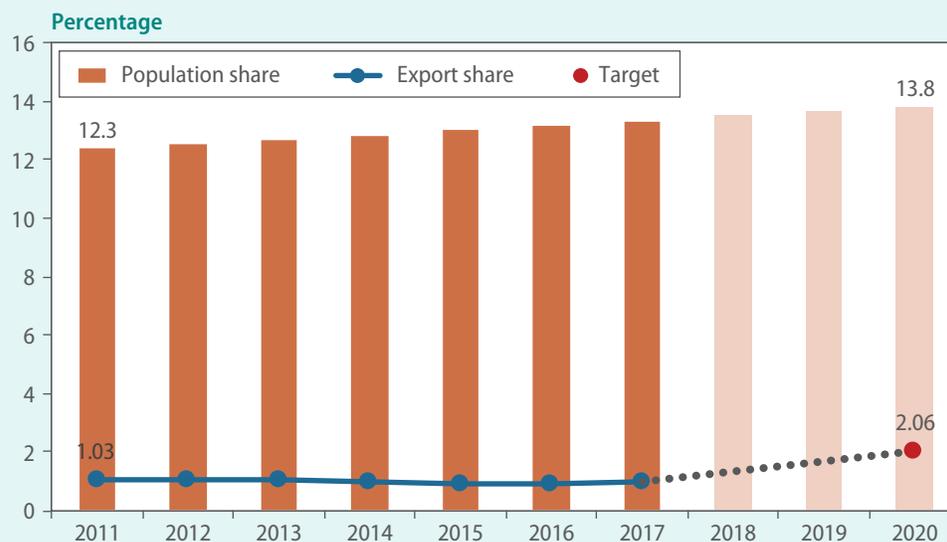
Structural issues, among others, lie behind these challenges. LDCs often have insufficient domestic productive capacities in activities generating high value addition and industries requiring advanced technologies, know-how and diverse human skills. Structural transformation requires carefully crafted and coordinated development policies as well as financial resources. In contrast to some oil-rich countries, LDCs are also lacking financial resources for development in crucial areas such as infrastructure, education and access to technologies.

Insufficient international collaboration to support access to markets still poses a barrier to the trade performance of LDCs. Issues such as non-tariff measures (NTMs), logistics, connectivity and trade facilitation can represent larger hurdles to exports than tariffs. Eliminating the distortionary trade effects of NTMs, for example, could increase LDC exports to Group of Twenty countries by \$23 billion, equivalent to a more than 10 per cent rise in total exports and more than twice the impact of tariff-free market access (Nicita and Seiermann, 2016).

^a UNCTADstat. 3-digit SITC classification, Rev. 3, available from http://unctadstat.unctad.org/EN/Classifications/DimSicRev3Products_Official_Hierarchy.pdf.

^b UNCTADstat. Lall classification, available from http://unctadstat.unctad.org/EN/Classifications/DimSicRev3Products_Ldc_Hierarchy.pdf.

Figure II.1.1

LDC share of world merchandise exports, population and the SDG target, 2011–2020

Source: UNCTADstat.
Note: 2018–2020 population figures are UNCTAD projections.

(continued)

New risks are also emerging as global tensions build up. Some developed countries are trying to replace the existing trade preferences favouring the LDCs by bilateral trade agreements based on reciprocity. Research by UNCTAD shows that trade agreements are often recycled from previous treaties, and powerful countries act as “rule makers” whereas poorer ones become “rule takers”. While the asymmetric bargaining power allows the former to get internally consistent and beneficial treaties, the latter accepts the deals that are closer to their trade partners’ interests. Thus, rule makers on average experience a larger increase in exports once the agreement enters into force than rule takers (Seiermann, forthcoming).

In contrast to bilateral agreements, the preferential trade arrangements for LDCs are often unilateral and extend the product coverage beyond the Generalized System of Preferences. Their substitution by bilateral agreements when negotiation powers are asymmetric may damage prospects for achieving SDG 17.11, impose losses on many LDCs and hamper trade among developing countries, which plays a vital role in fostering local production in high value added activities. Intra-African trade, for example, has a larger share of manufactured goods, and medium and high technology content, than the continent’s exports to the rest of the world (UNCTAD, 2018d).

Strengthening regional integration among developing countries is a strategy for enhancing domestic markets and boosting trade in an uncertain global trade context. In this respect, the African Continental Free Trade Area (see Box III.3) and other South-South initiatives can help to achieve sustained export growth in the LDCs.

Box II.1 (continued)

Authors: Mesut Saygili and Julia Seiermann (UNCTAD/DITC/TAB).

In 2018, the United States introduced global tariffs on steel and aluminium products. The tariffs were imposed on the grounds of national security concerns under Section 232 of the US Trade Expansion Act of 1962, which gives large discretion to the United States President in taking measures for national security reasons. This has been contested by several affected countries. Under General Agreement on Tariffs and Trade (GATT) Article XXI on security exception, any action could be taken in cases of substantial national security concerns such as “war or other emergency in international relations”. This clause has, in practice, rarely been used. Affected countries argue that the current political situation in the United States does not warrant such emergency measures, while the United States holds the view that the issue of national security is not subjected to review by the DSM.

The United States has also recently imposed a wide range of tariffs on goods imported from China, under Section 301 of the US Trade Act of 1974, which allows the United States President to take actions against trade practices by its trading partners considered to be “unfair”. Section 301 of the US Trade Act of 1974 was widely used as a trade policy instrument in the 1980s and 1990s. This often led to grey-zone policy arrangements such as voluntary export restraints (VERs). The inception of the WTO in 1995 has significantly reduced its relevance, as the new WTO rules on the DSM have prohibited unilateral measures without first going through the WTO dispute settlement procedures. Sections 301–310 of the US Trade Act of 1974 were challenged in the late 1990s. The panel in the case ruled, in essence, that the law was not in itself incompatible with WTO rules, but needed to be implemented in a manner consistent with them. Until now, the United States had refrained from taking recourse to Section 301 since the creation of the WTO. The tariff measures against China marked a departure from this practice.

In view of their systemic implications, handling these cases could place the DSM under tremendous strain. If the recently imposed unilateral tariff measures were judged to be justified, this might open the door to far greater use of unilateral measures by other countries, which risks eroding the disciplines of the world trade regime. If the measures were deemed incompatible with WTO agreements, securing compliance could prove to be

...but handling current trade disputes poses a challenge to the dispute settlement mechanism

a daunting challenge. Either way, the effectiveness of the DSM may suffer and the integrity of the MTS in general could be negatively affected, which constitutes a key challenge ahead.

The increase in trade tensions comes at a time when the WTO DSM has already been under pressure owing to the blockage of the appointment of new Appellate Body members (judges) due to the lack of consensus among WTO members. Four out of seven seats were vacant as of October 2018 leaving only three judges in the roster, the minimum number required to hear an appeal. In December 2019, another seat will become vacant at which time the Appellate Body would cease to function. Paralysis in the DSM would critically weaken the rules-based MTS.

Implications for multilateral negotiations

Unilateral and bilateral trade policy responses partly reflect limited multilateral progress...

Recourse to unilateral actions and bilateral approaches rather than multilateral approaches can be partly attributed to the limited and slow progress made in the MTS in key areas. This includes the inducement of market-opening trade liberalization, rule-making on modern trade issues and market-oriented trade policy reforms abroad, particularly in emerging economies, and the overall lack of progress in the Doha Round negotiations launched in 2001. WTO rules and the Doha negotiating agenda are considered by some to be outdated, given the rapid and drastic changes in the way trade is conducted within global value chains, enabled by a vibrant digital economy and services activities.

...as the negotiations under the Doha Round were complex and inefficient

The Doha Round was expected to redress imbalances inherent in the WTO architecture by placing development at its heart and vigorously tackling agriculture, services and the development agenda across negotiating issues. However, the negotiations struggled with single issues and consensus rule. Some developed economies have increasingly questioned the adequacy of treating large developing countries with a growing share of global trade in the same way as other smaller and more vulnerable developing countries. They advocate reforms to ensure that each country undertakes commitments in a manner commensurate with its share in global trade.

Given the deadlock, more pragmatic and flexible approaches have been suggested

The incapacity to continue negotiations on the sole basis of the existing Doha mandates became apparent at the Tenth WTO Ministerial Conference (MC10) in 2015. Developed countries did not reaffirm the existing Doha mandates and stressed the need for new approaches, including plurilateral ones, and new issues in achieving meaningful results. It was overtly argued that inclusion of new issues would be required to secure a balance of trade-offs across different negotiating areas. Most developing countries underscored the importance of the Doha mandate, the multilateral process and the development dimension.

Despite some ambiguity of mandates, significant efforts are being made to revitalize multilateral trade negotiations through a more pragmatic, incremental and flexible approach. Proposals for new approaches and new issues appear to have been partially taken on board in the latest Ministerial Conference (MC11) held in 2017. This includes plurilateral initiatives to discuss “new issues” relevant to twenty-first century trade, most notably on electronic commerce, as well as investment facilitation; micro, small and medium enterprises (MSMEs); and domestic regulation of services.⁵

This leaves open the possibility of new approaches, while also addressing traditional Doha negotiating issues on an issue-by-issue basis where feasible. This approach has already

⁵ The proponents of these initiatives emphasized that new ways of doing business would allow “willing countries” to move faster on specific issues. The critics expressed concerns over the possible implications for core WTO principles, including multilateralism and consensus rule.

borne fruit in delivering specific negotiated outcomes in respect of trade facilitation and food security in 2013, and elimination of agricultural export subsidies in 2015. On this basis, negotiations aimed at eliminating harmful fishery subsidies are being pursued with a view to finalization by MC12, now scheduled for June 2020. This is expected to contribute to delivering on SDG target 14.6 for prohibiting certain forms of fisheries subsidies.

The way forward

The 2030 Agenda for Sustainable Development recognizes the role of trade as a powerful enabler of sustainable development. Goal 17 of the SDGs defines trade as a means of implementation, and it calls for revitalizing the Global Partnership for Sustainable Development, including on trade. The central element is to “promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system” under the WTO (target 17.10 of the SDGs). A robust MTS, and meaningful progress in a revitalized multilateral process, are therefore essential for the achievement of Goal 17 while accelerating progress towards other SDGs. Furthermore, every effort must be made to protect the integrity and viability of the MTS. In fact, the WTO continues to attract new members with 36 countries having acceded since 1995, demonstrating its legitimacy.⁶ While there is strong support for the rules-based MTS, it is essential to also recognize and address its shortcomings.

Agreement on the case for economic integration is widely shared, as evidenced by continued engagement of economies in regional integration processes. Integration at the regional level could enhance countries’ readiness for further trade policy reforms and multilateral cooperation at a later stage. In March 2018, the eleven members of the original Trans-Pacific Partnership, other than the United States, signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. A web of large-scale bilateral free trade agreements is emerging, such as those between Canada and the European Union (EU), or Japan and the EU. Negotiations are underway for the Regional Comprehensive Economic Partnership Agreement in Asia and the Pacific. The case for developmental integration has also been acknowledged in Africa through a historic signing in March 2018 of the agreement establishing the African Continental Free Trade Area (AfCFTA) (see box III.3).

To sustain the viability of the MTS, actions at bilateral and multilateral levels as well as at national levels are necessary. The resolution of trade tensions arising from US tariff measures and countermeasures would need to be left in large part to bilateral discussions between the countries concerned. In the light of the primacy of the rules-based MTS, any bilateral solutions that may be sought could include a renewed commitment to multilateral rules, processes and institutions. This could also include the commitment to abide by the primacy of dispute settlement processes, and de-link bilateral trade tensions from ongoing multilateral Doha round negotiations, such as on fishery subsidies, so that the existing Doha negotiations could advance on a stand-alone basis where possible.

At the multilateral level, the system requires adaptation and modernization, addressing concerns over the possible limitations of the MTS, including delivering negotiated outcomes and securing compliance. Discussions could include ways to strengthen and modernize the MTS through reforms in its modus operandi to make the system more relevant and effective in dealing with twenty-first century trade realities and delivering results that will be conducive to inclusive and sustainable development. In the current context, various initiatives have been taken to examine possible reform options, for example, in the areas

International trade is a crucial dimension of the 2030 Agenda for Sustainable Development...

...as trade integration remains a major driver for progress

Action at national, bilateral and multilateral levels is required

⁶ Since 2008, 13 countries have become member of the WTO.

of subsidies, technology transfer, digital trade and the special and differential treatment (SDT) principle.⁷

WTO members have different views with regard to the future direction of the MTS. For instance, the developing countries stress the need for an MTS that does not undermine their efforts to pursue development, including industrial development. Hence, any reform efforts should take different interests and concerns on board in a balanced manner and prioritize practical and actionable solutions that will work for all members.

The MTS must be aligned with the SDGs

The backlash against the MTS also calls for strengthening policy responses at the national level. These responses need to focus specifically on the consequences of trade and trade agreements for domestic labour markets. In this context, trade adjusted assistance programmes play an important role by providing financial support, facilitating skills development and helping workers find new jobs. Trade policy and liberalization approaches within the framework of the strengthened MTS should aim at economic growth that is sustainable in all three dimensions.

Revenue mobilization for sustainable development

The investment needs associated with implementing the 2030 Agenda for Sustainable Development are immense. Currently mobilized domestic public resources are insufficient to meet these needs. The situation is most extreme in the LDCs: total tax revenues in about half of them fall below the 15 per cent of gross domestic product (GDP) level that recent research suggests is the minimum necessary to fund basic state functions (Gaspar et al., 2016). This is especially the case in countries that are experiencing or have recently experienced conflict. Within this context, the Addis Ababa Action Agenda on Financing for Development, adopted by the United Nations in 2015, provides comprehensive guidance to Member States of the United Nations and sets out policy options for enhancing the financing of sustainable development, including domestic revenue mobilization. The Addis Agenda recognizes the critical role to be played by development-oriented and progressive tax policies, modernized tax systems, and more efficient tax collection procedures in developing countries. At the same time, it promotes improved multilateral approaches, especially in the form of strengthened international tax cooperation and efforts to combat illicit financial flows.

Global trends in tax revenues

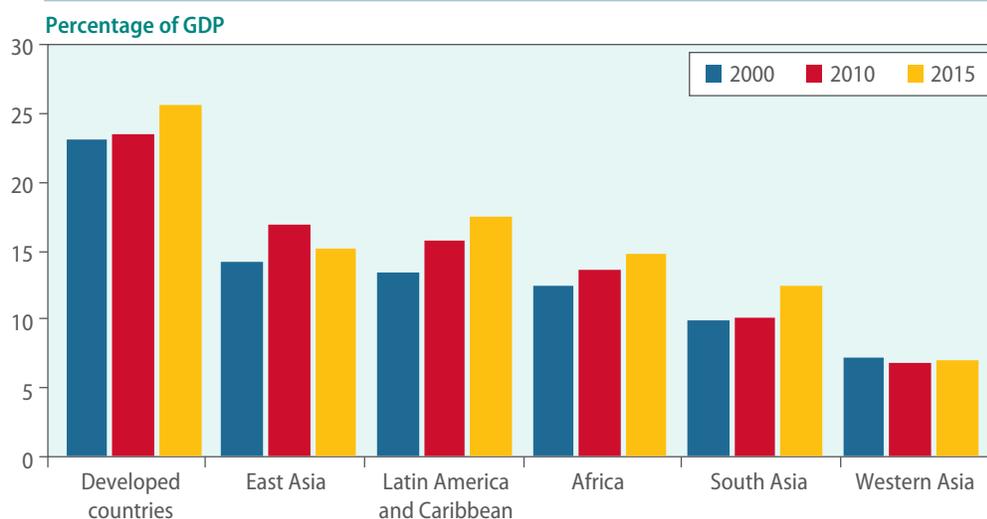
Tax-to-GDP ratios have risen in most developing regions since 2000

Increases in the nominal level of domestic public resources are primarily generated by economic growth. In general, developing countries have increased their tax revenue over the last 15 years both in nominal terms and as a share of GDP.⁸ Median tax revenue excluding social contributions as a proportion of GDP has gone up in most groups of countries since 2000, but large regional disparities in tax revenue generation persist (figure II.2 and table

⁷ See for instance, European Commission (2018a) and United States Trade Representative (2018). At the Trade Negotiating Committee and Heads of Delegations meeting in the WTO on 16 October 2018, many developing country members stated their positions on the WTO reform.

⁸ Generating consistent, comparable revenue data and measuring revenue as a percentage of GDP is a complex undertaking. For example, there are changes and unevenness in the implementation of the system of national accounts in some countries, differences between federal and non-federal systems, and differences between budgetary and other central government information. These challenges create difficulties in aggregation, as well as in measuring trends over time.

Figure II.2
Median tax revenue by country groupings, 2000, 2010 and 2015



Source: UN/DESA calculations, based on the IMF 2017 World Revenue Longitudinal Database (WoRLD).

Note: Only countries that have observations for all three years have been included.

II.1). These stem from a number of factors, including differences in national economic structures, tax administration capacity and policy choices. Developed countries continue to have the highest shares of taxation, recording an increase in the median tax revenue from 23.4 per cent in 2010 to 25.5 per cent in 2015. On the other side of the spectrum, South Asia and Western Asia have the lowest tax-to-GDP ratios. Positive trends have recently been observed in Africa and in Latin America and the Caribbean. In these regions, the median tax-to-GDP ratio has risen considerably since 2000. From 2010 to 2015, 36 African countries saw increases (gaining on average 2.7 percentage points), while 14 countries recorded a decline. Of those, the biggest declines were registered in countries that are hydrocarbon exporters, such as Algeria, Angola, Chad and Nigeria, reflecting the effect of lower oil prices in commodity-dependent economies.

International tax cooperation

In a world of significant cross-border trade, investment and financial flows, there are also limits to what countries can do on their own through domestic taxation policies. The speed and ease of financial transfers, and the increasing importance of non-tangible assets (which can easily be shifted between countries) in modern economies, underline the need for international tax cooperation. For many years, international tax cooperation focused on the conclusion of bilateral tax treaties, which had the principle aim of reducing double taxation. Recently, international tax cooperation has increasingly looked at closing loopholes, preventing tax avoidance, increasing the exchange of information between tax authorities to limit tax avoidance by all types of taxpayers, and curbing illicit financial flows.

Debates have escalated regarding the most appropriate way to allocate taxing rights on the profits of multinational enterprises (MNEs), as well as about the tax treatment of cross-border services and digital transactions. Attention is focused on transfer pricing between branches or subsidiaries of MNEs located in different tax jurisdictions; on appropriate tax treatment of the provision of intellectual property, such as trademark usage; on technical services, such as management functions between parts of the same MNE; as well

The need for international tax cooperation is increasing

Table II.1
Per capita tax revenue by region, 2015

Region	Per capita tax revenue, dollars
Developed countries	9,550
Latin America and Caribbean	1,553
Economies in transition	1,395
Western Asia	1,327
East Asia	1,233
Africa	287
South Asia	247

Sources: UN/DESA calculations, based on data from the IMF 2017 World Revenue Longitudinal Dataset; IMF World Economic Outlook October 2018 database; United Nations World Population Prospects 2017.

as on varying treatment in different tax jurisdictions of debt and interest payments associated with the significant intra-MNE financing by subsidiaries.

There is no exact data on the value of intra-MNE trade, but the rise of trade in intermediate goods supports the conjecture that it is an increasing portion of trade. Some estimates put the total at 30 per cent of all international trade.⁹ While there is international consensus that taxes should be paid where economic activity occurs and value is created (United Nations, 2015, para. 23), the value of trade in intangibles and the location of value creation are hard to define and measure.

Tax challenges are compounded by digitalization and other emergent technologies

The existing challenges in determining the appropriate tax base related to MNE activity are compounded by the transformation of many economies through digitalization and other emergent technologies. Greater access to information and enhanced digital systems and processing capabilities opens new options for tax authorities to improve collection and compliance. At the same time, the digitalization of business models makes the determination of the appropriate jurisdiction for taxation more difficult. Digitalized companies may be able to generate large sales with little or no physical presence in an economy. They may also generate value by monetizing the data obtained from the use of their services by end consumers. There are many different views on how to adapt international tax rules to the digitalization of the economy. While norm changes are currently being discussed within the EU, the Organization for Economic Cooperation and Development (OECD), the Inclusive Framework for BEPS Implementation (a Group of Twenty (G20)/OECD initiative), and at the United Nations Committee of Experts on International Cooperation in Tax Matters, a number of countries are moving ahead with measures such as digital services taxes. In setting new norms related to taxation of digitalized economic activity, policymakers need to think carefully about the implications, especially as the rules are likely to affect an increasing portion of their tax base over time. New rules may imply different allocations of taxing rights, and these rights may be distributed in ways that are counter-productive to achieving greater convergence and equity in international taxation.

Multilateral approaches must leave space for effective national tax policies

Given the challenges surrounding the allocation of tax bases for an increasingly complex array of intra-firm and digital transactions, international tax cooperation and inclusive norm setting have become even more important. International tax discussions are usually dominated by sovereignty concerns, as tax policies define the relationship between citizens and the state and undergird the social contract and the provision of public services. Furthermore, as markets for many new digital services are frequently dominated by a few firms,

⁹ For a deeper discussion, see UNCTAD (2013) and UNCTAD (2018a, box 2.1).

their power to influence policymaking should be considered. To guard against international tax norms that may disadvantage some countries, Member States have agreed that efforts in international tax cooperation should be universal in approach and scope and should fully take into account the different needs and capacities of all countries. In the digitalized era, a multilateral approach to taxation is important. Nevertheless, this approach needs to leave space for countries to adopt effective tax policies that enhance domestic public finance for sustainable development.

The strengthening and scaling up of international tax cooperation is still a work in progress. New multilateral legal instruments are being developed, which represents a fundamental change of direction for tax cooperation away from bilateral approaches. Considerable progress has been made in several areas: exchanging information about the assets held in accounts in financial institutions; preparation and exchange of country-by-country reports of multinational enterprises; mutual assistance among tax administrations for sharing information and resolving disputes; and instruments to implement changes to international tax norms agreed by the OECD and G20 in 2015 to cut down on base erosion and profit shifting (BEPS).¹⁰

A key milestone was passed in 2017, as 49 jurisdictions began exchanging information for the first time under the Global Forum on Transparency and Exchange of Information for Tax Purposes' Automatic Exchange of Information standard. This requires tax authorities to automatically exchange financial account information of non-residents with the tax authorities of the account holders' country of residence based on a common reporting standard (CRS). A further 53 jurisdictions are starting such exchanges in 2018. However, there is a systemic imbalance in application of these norms, as many developing countries either find it difficult to participate or choose not to for a variety of reasons, often because of a lack of capacity of tax authorities to meet the reciprocity demands of the systems. For example, out of over 100 participating jurisdictions in the Automatic Exchange of Information standard, only one is an LDC. The lack of a fully multilateral system will undermine the prospects for those that want to use such cooperation to crack down on undeclared offshore wealth and other forms of tax evasion. Two types of challenges emerge: those resulting from countries opting out, and those from countries excluded from participation. First, non-participation of some jurisdictions will provide options for tax evaders to continue to hide wealth. Although the CRS is based on the United States Foreign Account Tax Compliance Act, the US Government has not yet signed on to the international standard and is not participating in reciprocal exchanges under the multilateral system set up at the Global Forum. This leaves a major economy, which is both a source and destination of wealth, out of the primary international system for tax-information exchange. Second, many smaller and poorer countries with limited capacity in their tax administrations are excluded. As a result, some of those that are furthest behind in tax collection are unlikely to benefit from increased multilateralism.

Exchange of country-by-country information on MNEs, which will start in 2019, is another example of the importance of multilateralism. At present, the exchange will be done through a bilateral process. MNEs will file a full set of country-by-country reports in their home jurisdictions. Jurisdictions that host MNE branches or subsidiaries will only gain access to those reports through exchanges with the host-country tax authority. Countries have submitted expressions of interest for exchange to the OECD, and when jurisdictions

Significant progress has been made in several areas of tax cooperation...

...but the lack of a fully multilateral system creates challenges

¹⁰ For a longer description of the BEPS Action Plan and its potential implications, see United Nations (2016), pp. 103–106.

have expressed reciprocal interest, there is a bilateral match for exchange. More than 1400 of these matches have now been activated. However, of these, only 477 involve middle-income countries, and no LDCs have any matches (United Nations, 2018a). Although some LDCs have requested matches, no developed country has prioritized them in the process. This leaves opportunities for tax avoidance and evasion, harming the efforts of excluded countries to mobilize revenue. More work needs to be done to enable all developing countries to benefit from new tax norms, especially the poorest ones.

At the same time, reforms to international tax norms, which have been agreed in bodies that are not inclusive of all countries, will impact sustainable development across all jurisdictions. Further analysis is needed on the impact of these reforms, especially for the poorest countries, given that the ability to effectively tax relevant transactions must be maintained. Unfortunately, the data that is needed to complete this analysis—such as complete aggregate information from the country-by-country reports of multinational enterprises—is not yet available in the public sphere. This hampers the capacity of international organizations and researchers to assess the consequences and make relevant policy recommendations. Ultimately, more inclusive multilateralism in the tax sphere will ensure that no countries are left behind, and that the world can achieve shared progress on securing public revenue that is vital to sustainable development-oriented investment.

Illicit financial flows

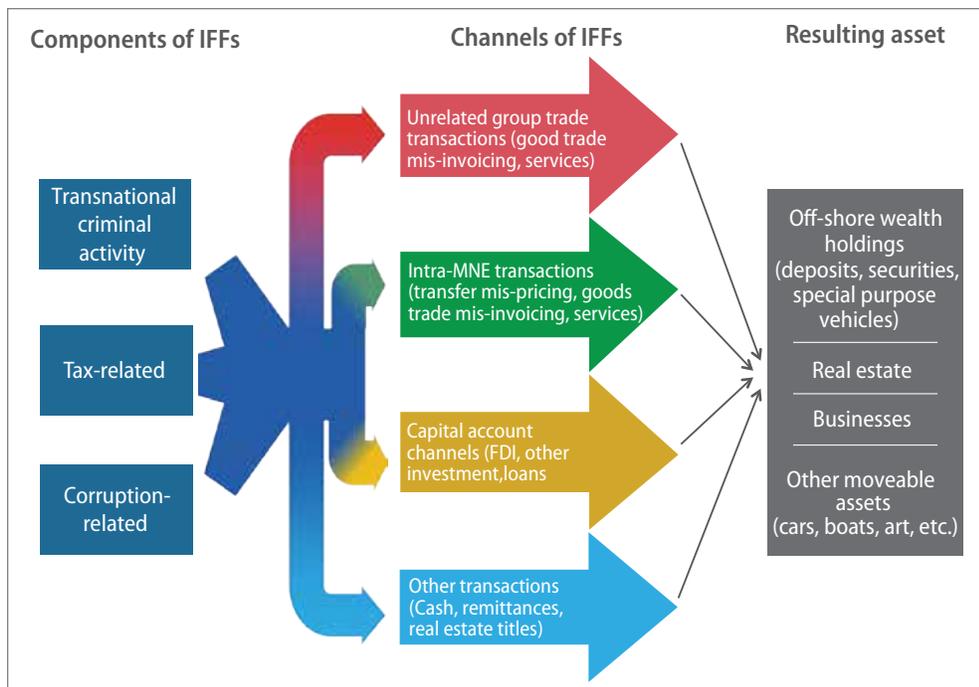
Illicit financial flows are a major obstacle for domestic resource mobilization

While improved tax administration, better national tax policies, and strengthened international tax cooperation are essential factors in mobilizing domestic resources for sustainable development, illicit financial flows (IFFs) represent a major obstacle to these efforts. Member States expressed their deep concern about IFFs and have repeatedly called for greater international cooperation to combat illicit financial flows.¹¹ However, there remains no universally agreed definition of what constitutes IFFs, although there are some parameters for identifying IFFs that are frequently referenced. First, illicit financial flows are often defined as constituting money that is illegally earned, transferred or used and that crosses borders. Second, there are generally three categories of IFFs, although these are not mutually exclusive or comprehensive: IFFs originating from transnational criminal activity; corruption-related IFFs; and tax-related IFFs. Even within the above parameters, controversies remain, particularly on how to treat tax-related IFFs. Tax practices such as BEPS are sometimes challenging because of differences in legal standards across countries, the absence of legal frameworks, and different interpretations and acceptance of norms on international taxation. Figure II.3 shows a schematic representation of components and channels of IFFs, noting that multiple components and channels can be combined in specific transactions. As the different components of IFFs are not comparable, aggregation across channels and components could result in double counting, and analysis of channels or components separately is more beneficial in designing policy responses to prevent illicit flows.

Tackling IFFs more effectively will not only bolster domestic resource mobilization but also help build trust and confidence in the fairness of the tax, legal and financial systems, the efficiency of law enforcement, and in government as a whole. The lack of agreement on the definition of IFFs need not curtail or constrain the important work of countries on strengthening existing institutions and policies for combatting IFFs in both source and destination countries. Efforts can be directed at both the ultimate owners of the resources involved

¹¹ General Assembly resolution 72/207 of 20 December 2017.

Figure II.3
Schematic representation of components and channels of illicit financial flows



Source: United Nations (2018a).

in IFFs as well as at the enablers of transactions, including financial institutions, accountants and other professional service providers.

One critical area of work is tackling the anonymity of transactions, which is facilitated by shell companies and trusts. New international standards have been agreed, that keep beneficial ownership information in a manner available to country authorities. However, except for a few efforts in Europe, initiatives for the publication or sharing of beneficial ownership information have faltered. Further consideration should be given to advancing the exchange of beneficial ownership information among tax authorities, but no standard or multilateral accord has yet been developed. Deeper cooperation to develop such standards and greater financial transparency would facilitate efforts towards encouraging tax compliance, containing BEPS and combatting IFFs.

Multilateral approaches for sharing beneficial ownership information are required

Macroeconomic conditions and climate change

The baseline outlook points to continued robust growth of economic activity in 2019–2020 at the global level. However, the adverse impact of modern economic activity on the environment is apparent. This includes loss of biodiversity and ecosystems, deforestation, water pollution, deterioration of air and soil quality, and emissions-driven climate change. Economic activity continues to be powered by fossil fuel, which in turn leads to rising greenhouse gas emissions and climate change.

The current scientific consensus indicates that a fundamental shift in the way the global economy produces goods and services is necessary in a short period of time to avert further serious damage to our natural and human systems and avoid “tipping points”—

thresholds beyond which certain impacts can no longer be avoided. Steep emissions reductions, and a decoupling of economic growth from equivalent increases in resource use, are required in all sectors, as are far-reaching changes in the energy sector, land use, urban planning, agriculture and industrial systems, as well as substantial mitigation and adaptation measures (IPCC, 2018).¹² Such a fundamental transformation requires policy action on many fronts, acceleration of technological innovation, and significant behavioural changes. While some progress has been achieved compared to a few decades ago, much more remains to be done given the magnitude of the transitions required. Strong international cooperation and a scaling up of countries' collective efforts is necessary for greenhouse gas emissions to decline fast enough in the coming decade to confine global warming and meet the Paris Agreement targets.

Economic growth and emissions

Continued global economic and population growth have driven the persistent, worrying rise in greenhouse gases (GHG) and other gases stemming from human activities. Between 1990 and 2015, as the global level of production doubled, anthropogenic GHG emissions increased 45 per cent, reaching almost 50 gigatonnes (Gt) of carbon dioxide (CO₂) equivalent (International Energy Agency, 2018). CO₂ emissions constitute most of these emissions. Consequently, global CO₂ concentration in the atmosphere has increased since 2000 at a speed up to 10 times faster than any during the past 800,000 years. CO₂ emissions from fuel combustion represented over two thirds of total GHG emissions in 2015 (figure II.4). The primary use of fuel combustion is to generate energy, which is used for various purposes, including engine power, heat and electricity. The energy sector is thus the largest contributor to global anthropogenic GHG emissions.

CO₂ emissions have likely reached a record high in 2018

After three years of remaining flat, global energy-related CO₂ emissions increased 1.5 per cent in 2017, reaching a historical high of 32.5 Gt. This resulted from the acceleration of global economic growth, supported by the relatively low cost of fossil fuels and weaker energy efficiency efforts, according to the International Energy Agency (IEA). Preliminary evidence of global energy-related CO₂ emissions suggests a further increase in 2018. At this rate, the IEA warns, current efforts to combat climate change are insufficient to meet the objectives of the Paris Agreement.

Insufficient energy efficiency gains and unchanged carbon content of energy prevent decoupling

Growth in GDP and emissions remains closely linked (figure II.5). A decomposition analysis of global CO₂ emissions into the contributions from economic activity, offset by gains in energy efficiency—defined as the global consumption of energy (in terms of oil equivalent) per unit of output—and emissions intensity of the global energy mix shows that the decline in emissions per unit of output produced has been insufficient to halt the rise in total carbon emissions. In 2017, a 1.0 per cent increase in world gross product was associated with a 0.5 per cent increase in global CO₂ emissions.

Nonetheless, the level of emissions per unit of output produced has declined substantially since 1990. This reflects reductions in the energy intensity of production of approximately 1.5 per cent per year between 1990 and 2017. The pace of efficiency gains has accelerated in recent years, averaging 2.3 per cent in 2014–2016, but slowed to 1.7

¹² This section focuses on climate change, but environmental and social sustainability is also under increasing threat from the unfettered rise in natural resource use. Sustainability will require reducing both the carbon- and resource-intensity of our production and consumption patterns.

Figure II.4
Global anthropogenic GHG emissions, 2015

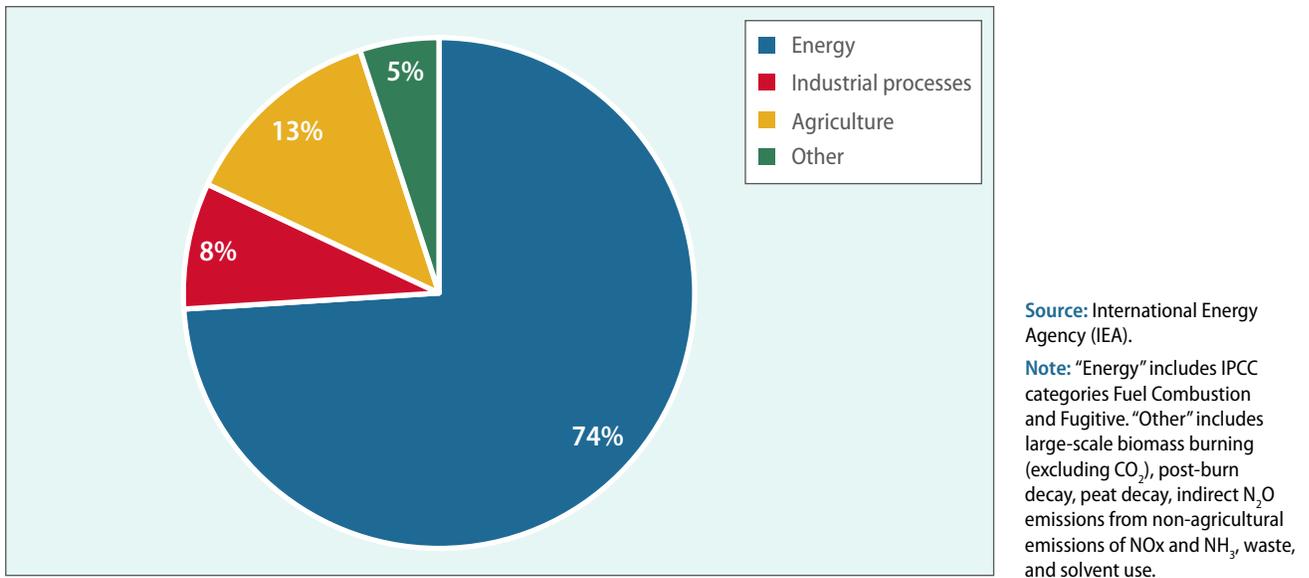
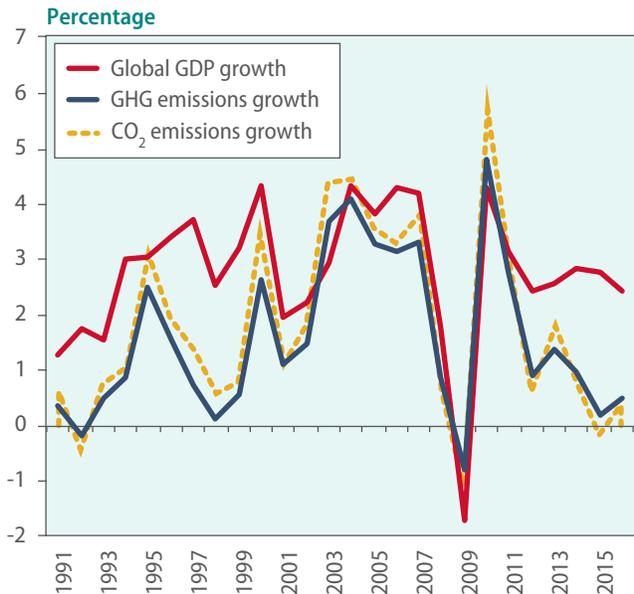
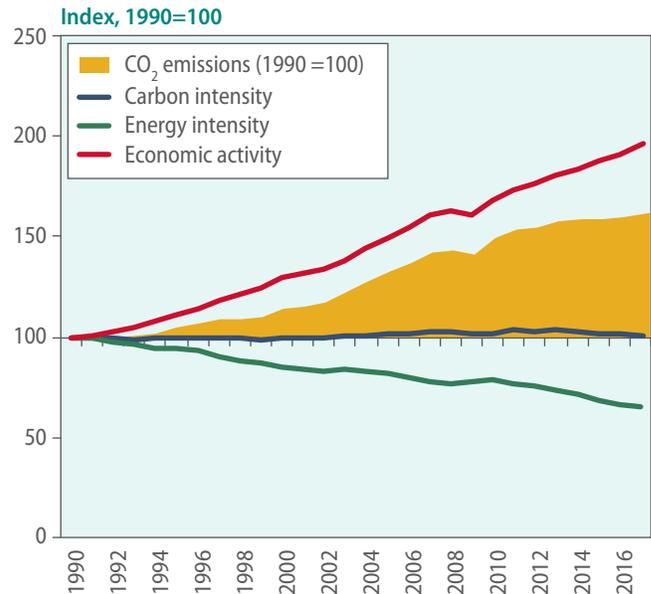


Figure II.5
GDP and emissions growth

A. GDP and GHG emissions growth, 1991–2016



B. Decomposition analysis of global CO₂ emissions, 1990–2017



Sources: UN/DESA calculations, based on data from the United Nations Statistics Division (UNSD) and PBL Netherlands Environmental Assessment Agency (left) (2013–2016 emissions are estimates) and UN/DESA staff estimations, based on data from European Commission, IEA and UNSD (right).

Note: Carbon intensity is total emissions divided by global consumption of energy. Energy intensity is global consumption of energy divided by world gross product. Economic activity is world gross product in 2010 market prices.

per cent in 2017 due to the low fossil-fuel price environment and weaker improvement in efficiency policy coverage and stringency (IEA, 2018). Declines in the energy intensity of production may also reflect shifts in the structure of global production, towards less energy-intensive sectors.

Stronger emissions reduction requires tangible progress in lowering carbon intensity

Despite the expansion of renewables and natural gas, global energy usage has become only slightly less carbon intensive. Transition to a more sustainable energy mix is proceeding slowly. Since 2014, the carbon content of the global energy mix has been decreasing marginally, at an average rate of 0.6 per cent per year. While the share of renewables in energy production has risen, global consumption of coal remains essentially unchanged, and absolute levels of oil and gas consumption continue to rise. Without a significant step up in the use of cleaner sources of energy and much faster energy efficiency gains, global CO₂ emissions are likely to continue to rise. Any uptake of emissions by forests or through development of carbon-absorbing technologies is uncertain. Thus, it cannot be relied on to compensate for lack of progress on these fronts within the very short time frame available.

CO₂ emissions did not rise everywhere

The same decomposition analysis at the country level reveals some important differences across countries. In China, CO₂ emissions have stabilized in the past five years, as increasing economic activity has been matched by energy efficiency gains. In the United States, CO₂ emissions remain above 1990 levels, but have decreased since 2006 due to improvements in both energy efficiency and carbon intensity. In Japan, CO₂ emissions are decreasing as a result of improved energy efficiency per unit of GDP. Carbon intensity was also decreasing until 2011, but the nuclear power phase-out following the 2011 Fukushima nuclear disaster increased the carbon content of the energy produced. Similarly, in Germany, CO₂ emissions have stabilized, but the carbon intensity has increased mildly since 2011, possibly as a result of nuclear power phase-out. The substantial gains in energy efficiency and carbon intensity exhibited by some countries demonstrates the potential for more rapid progress towards delinking emissions growth from economic growth. However, a dramatic step up in mitigation efforts is needed at the global level. Declines in the energy intensity of production must accelerate to roughly double the average rate seen since 1990, combined with a much faster transition towards a lower carbon energy system.

Emissions and climate change

Impacts on natural and human systems from global warming have already been observed

The Intergovernmental Panel on Climate Change (IPCC) assesses that human activities, such as GHG emissions and land-cover changes, have already caused approximately 1.0°C of global warming above pre-industrial levels (1850–1900) (IPCC, 2018). Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate—about 0.2°C per decade—due to past and ongoing emissions. By 2100, warming is on track to reach 3°–4°C above preindustrial temperatures with potentially further warming thereafter. These estimates take into account countries' Nationally Determined Contributions, in which they have committed to specific GHG emission reductions up to 2030.

While a high degree of climate uncertainty exists, the consequences of global warming are manifold. Several land and ocean ecosystems and some of the services they provide have already changed owing to global warming. Some impacts may be long lasting or irreversible, such as the loss of ecosystems.

Over the past few decades, the world has observed an increasing number of extreme weather events. According to Munich Re's NatCatSERVICE database, the number of registered weather-related loss events has more than tripled since the 1980s (figure II.6). The year 2017 ranks among the top five years in terms of number of natural catastrophes. While

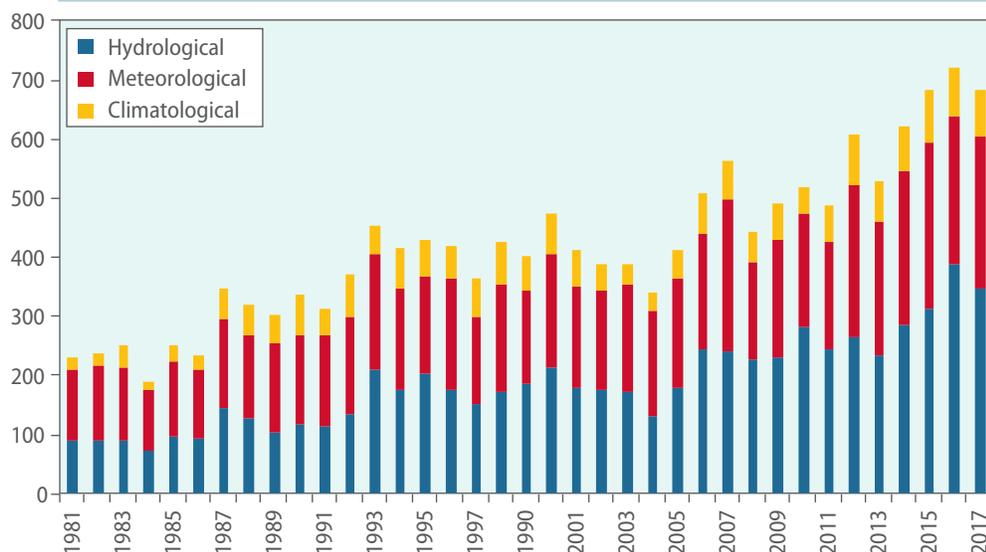
attribution of any given weather event to climate change alone is difficult, climate change is expected to increase the likelihood and intensity of extreme weather events, such as catastrophic floods, droughts and storms (IPCC, 2013). Furthermore, scientists have found that climate change was a significant driver of 65 per cent of 131 weather events examined in the last 6 years (Herring et al., 2018). Three of these events were considered to be beyond the bounds of natural variability, which means these events were not possible in a preindustrial climate, before human-induced greenhouse gases were changing the climate.

Climate change already poses serious threats to communities. In 2017, there were 18 million new internal displacements in 135 countries due to weather disasters (Internal Displacement Monitoring Centre, 2018). Estimates of financial losses related to relevant¹³ natural events reached \$335 billion globally, of which less than half were insured (\$140 billion) according to Munich Re's NatCatSERVICE database.¹⁴ An alternative estimate puts the reported direct economic losses between 1998 and 2017 due to climate-related disasters at \$2,245 billion (United Nations International Strategy for Disaster Reduction, 2018). Overall, reported losses from extreme weather events rose by 151 per cent between 1978–1997 and 1998–2017. However, these figures may underestimate actual loss value, as data is not available for nearly 90 per cent of disasters in low-income countries. Importantly, while absolute economic losses might be concentrated in high-income countries, the human cost of disasters falls overwhelmingly on low- and lower-middle-income countries (ibid.).

Climate change is expected to substantially dampen economic growth in many developed and developing economies. Warming is projected to be the highest in the Northern Hemisphere, where several of the world's largest economies are located. One study finds that limiting global warming to 1.5°C as opposed to 2.0°C would substantially reduce eco-

Negative growth effects are likely to be strongest in developing countries

Figure II.6
Number of registered weather-related loss events worldwide, 1981–2017



Source: NatCatSERVICE.

Note: Hydrological events include flooding (river floods, flash floods and storm surges) and wet mass movements (rock fall, landslides, avalanches and subsidence). Meteorological events include storms (tropical, extratropical and local windstorms). Climatological events include extreme temperatures (heat waves, freeze and extreme winter conditions), droughts and wildfires.

¹³ Relevant events are considered those where fatalities exceeded one person and normalized overall loss is equal to or higher than \$100,000, \$300,000, \$1,000,000 or \$3,000,000 (depending on assigned World Bank income group of each affected country).

¹⁴ Database was accessed on 7 December 2018.

Climate risks in SIDS and LDCs threaten infrastructure and tourism revenues

conomic losses associated with climate change in China, Japan and the United States (Burke et al., 2018). Another study estimates that the economic damage in the United States from climate change would be roughly 1.2 per cent of GDP per 1.0°C increase on average under a scenario where GHG emissions continue to rise throughout the twenty-first century (Hsiang et al., 2017). Still, it is the developing economies in the tropics and Southern Hemisphere subtropics that are projected to experience the largest economic losses due to climate change.

Small island developing States (SIDS) and LDCs are among those facing the highest risks of adverse consequences from climate change, as they are exposed to multiple interrelated climate risks. For example, drought is found to significantly increase the likelihood of sustained conflict, particularly for vulnerable countries or groups dependent on agriculture, which includes several LDCs. Additionally, many SIDS and LDCs derive a substantial proportion of national income (more than 15 per cent of GDP) and foreign exchange from tourism, which is threatened by climatic change. In SIDS, increasing global temperatures, intensifying storms and elevated thermal stress cause loss of tropical coral reefs and associated recreational services, while increasing the risk of wave-driven coastal flooding. A recent study found that an eventual one-metre sea level rise could partially or fully inundate 29 per cent of 900 coastal resorts in 19 Caribbean countries, with a substantially higher proportion (49–60 per cent) vulnerable to associated coastal erosion (Scott and Verkoeyen, 2017 and box II.2). A global vulnerability index covering 181 countries found that among those with the highest risks of climate-related losses are SIDS in the Caribbean, and Indian and Pacific Oceans (Scott and Gössling, 2018). In the case of 1.5°C warming, the Caribbean is expected to see higher temperatures, with longer warm spells and longer hot and dry spells. The effects would be more severe in the case of a 2°C increase (Taylor et al., 2018). Even at 1.5°C warming, several atoll islands might become uninhabitable due to increases in aridity, decreases in freshwater availability, and sea level rise. Changes in availability and quality of freshwater may adversely impact SIDS economies, too. Finally, tropical regions, including small islands, are expected to experience the largest increases in coastal flooding frequency with the frequency of extreme water-level events in small islands projected to double by 2050.

Climate change and policy

Dramatic economic and technological transformations are required in order to limit the global temperature rise to 1.5°C–2.0°C above pre-industrial levels. The fundamental elements of such transformation include accelerated decoupling of economic growth from energy demand and CO₂ emissions, and development and adoption of low-carbon, zero-carbon and carbon-negative technologies at a global scale.

Establishing a price for emissions could limit warming in a cost-effective way

Central to prompt mitigation efforts is internalizing the negative climate risks associated with emissions into economic decision-making and thereby reducing the demand for carbon-intensive services and fossil fuels. This can be achieved through tools such as carbon pricing measures, energy efficiency policies (such as minimum performance standards and building codes) and reduction of socially inefficient fossil-fuel subsidy regimes. Carbon pricing can serve as an incentive for low-carbon technology innovation, as well as generate an additional source of government revenue, which could be redistributed in the form of social transfers to ease the transition to the low-carbon economy or used to subsidize the development of low-emissions technology and infrastructure. Carbon pricing would also incentivize deployment of carbon removal practices such as natural climate

Box II.2

Climate change adaptation for coastal infrastructure in Caribbean small island developing States

Seaports and coastal airports are critical infrastructure assets that serve as catalysts of economic growth and development in the Caribbean. Compelling scientific studies (IPCC, 2014a and b; IPCC, 2018) project that climate change will increase the hydro-meteorological hazards for the coastal transport infrastructure of the Caribbean, one of the most disaster-prone regions worldwide. Significant socioeconomic consequences (e.g., for tourism and trade) are expected as these vital international transportation facilities are threatened by climate change. Climate-related extreme events affecting coastal transport infrastructure are likely to exacerbate existing challenges, making effective adaptation action an urgent imperative (UNCTAD, 2014).

The Caribbean might face climate-related losses of \$22 billion annually by 2050. In terms of infrastructure damages due to sea level rise alone (exclusive of hurricane damage), the cost of inaction has been projected to amount to about \$16 billion annually by 2050 (Bueno et al., 2008). The significance of threats associated with extreme weather events has been highlighted by the impacts of the 2017 hurricane season that wreaked havoc on several Caribbean islands, including coastal airports and seaports. Global economic losses in relation to extreme weather-related events in 2017 were estimated at \$330 billion (MunichRe, 2018). Dominica's total damages and losses from hurricane Maria alone have been estimated at 224 per cent of the country's GDP (Government of the Commonwealth of Dominica, 2017), whereas losses from hurricanes Irma and Maria in Anguilla, the Bahamas, British Virgin Islands, Saint Maarten, and Turks and Caicos Islands have been estimated at \$5.4 billion, with infrastructure-related costs representing a significant percentage of the total (ECLAC, 2018b). Economic implications of hurricanes Harvey, Irma and Maria also include, inter alia, reported losses by airlines serving the Caribbean (e.g., \$75 million by American Airlines and \$40 million by Spirit Airlines (Barrow, 2017)); at the disruption

Figure II.2.1

Projected flooding of George F.L. Charles International Airport and Port Castries, Saint Lucia

Source: Monioudi et al., 2018.

Note: Under 1.5°C warming compared with the pre-industrial times (2030), GICIA appears vulnerable to the one in 100 years extreme sea level (ESL100) mostly at its northern side (Vigie beach). As the century progresses, its vulnerability will increase. In addition, Vigie beach, located only 30 metres away from the airport fence, has been projected to face significant beach erosion that will further increase coastal flooding. Under a 50-year ESL by 2050 (under the moderate IPCC RCP 4.5 scenario) the runway will be flooded from Vigie beach. Given that Port Castries is only about 1.5 metres above mean sea level, there will be significant damage to the port and the capital city of Saint Lucia. Later in the century, and under both RCP scenarios tested, flooding is projected to deteriorate in the absence of effective adaptation measures.

(continued)

Box II.2 (continued)

peak, revenue losses for the industry were estimated at \$75 million to \$85 million per day (International Air Transport Association, 2017).

A recent assessment by UNCTAD (2017b) of the climate change induced impacts on the seaports and coastal airports of two Caribbean small island developing States (SIDS) (Jamaica and Saint Lucia)—an assessment that focused on the risk of coastal flooding and of potential operational disruptions under different climate scenarios (Monioudi et al., 2018; IPCC, 2018)—highlights the importance of climate change adaptation for critical international transportation assets. The study projected severe impacts on coastal transport infrastructure and operations that could cause major disruptions to the connectivity of SIDS to international markets, as well as to related economic sectors such as tourism.

Projections show that the coastal transportation assets of both Jamaica and Saint Lucia will face rapidly increasing coastal flooding in the twenty-first century. Flooding is projected for the airport runways of some of the examined airports and for most seaports from as early as the 2030s. Tests that consider the resilience of infrastructure in the face of a once-in-one-hundred-years extreme event (in terms of sea level and waves) under the 1.5°C specific warming level (which will be reached by the early 2030s) indicate flooding for the airport runways of some of the examined airports (the George Charles International Airport and Hewanorra International Airport in Saint Lucia, for example, as well as Sangster International Airport in Jamaica) and for most of the seaports. The exposure of these assets to coastal flooding is projected to deteriorate as the century progresses (figure II.2.1).

Results of the study (Monioudi et al., 2018) also suggest that air transport operations will be affected in Jamaica and Saint Lucia due to future climate variability and change. The projected increases in the frequency of hot days will likely affect the ability of airport staff to work safely outdoors, require reductions in aircraft payloads, and increase energy costs. Projected operational disruptions include the following:

- Outside working conditions. By the early 2030s, staff working outdoors at the Jamaica and Saint Lucia international transportation assets could be at high risk for 5 and 2 days per year, respectively. By 2081–2100, such days could increase to 30 and 55 days per year, respectively;
- Aircraft take-off. By 2030, Boeing 737-800 aircraft that serve all studied airports will have to decrease their take-off load for 65 days per year at Sangster International Airport (SIA) and 24 days per year at Norman Manley International Airport (NMIA)—both in Jamaica—whereas by the 2070s, such days could increase at least twofold for SIA and fourfold for NMIA, assuming no targeted aircraft design changes;
- Energy needs. A 1.5°C temperature rise will increase energy requirements by 4 per cent for 214 days per year for Jamaican seaports, whereas a 3.7°C rise (2081-2100) will increase energy requirements by 15 per cent for 215 days per year. Saint Lucia seaports are projected to experience similar trends.

Finally, the dominant 3S (sea-sand-sun) tourism model of Saint Lucia and other Caribbean island destinations is projected to be challenged by increasing beach erosion, which, by 2040, may overwhelm between 11 and 73 per cent of Saint Lucia's beaches (UNCTAD, 2017b). The negative ramifications for tourism—the main driver of many Caribbean SIDS economies, accounting for between 11 and 79 per cent of their GDP (ECLAC, 2011)—are potentially severe. Due to the strong nexus between tourism and the facilitating transport infrastructure, this will also have negative impacts on transportation demand.

It should be noted that important gaps remain in terms of data availability, as well as current levels of resilience and preparedness among seaports worldwide, as revealed by the UNCTAD Port Industry Survey on Climate Change Impacts and Adaptation (UNCTAD, 2017c). Given the potential economic implications of climate-related damage, disruption and delay, relevant information and adequate climate adaptation efforts are urgently required, especially for ports in developing regions and SIDS.

solutions (reforestation, land-use change and other ecosystem-based approaches). These measures could also accelerate efforts towards economic diversification in countries that remain highly reliant on fossil-fuel production. However, care must be taken to ensure a fair transition for communities adversely affected by climate change policies.

Such radical transformations require a major shift in investment patterns and a financial system aligned with mitigation challenges. According to the IPCC, limiting global warming to 1.5°C will require an annual average investment in the energy system of about \$2.4 trillion (constant 2010 dollars) between now and 2035, representing about 2.5 per cent of world GDP (IPCC, 2018). More broadly, climate risks must be more readily integrated into investment decisions. For example, plans for development in hazard-prone locations (e.g., flood plains, vulnerable coasts, earthquake zones) must reflect the perceived disaster risks in those areas (United Nations International Strategy for Disaster Reduction, 2018). To this end, some progress is being made by the G20 Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD), which seeks to improve the quantification and disclosure of the financial impact of weather events in private and public entities. Climate-related disclosure can contribute to an orderly transition to a low-carbon economy by allowing investors to better evaluate their financial risk exposures (Batten et al., 2016).

Besides demand-side management, Governments can also act on the technology supply side via “technology push” policies, such as research and development subsidies, to stimulate the technology market, in particular in regions with well-developed institutional and technological capabilities such as developed and emerging economies. Where technical capacities are insufficient, international cooperation on technology, including technology transfer, is needed to decrease the costs of global emissions mitigation and enhance the contributions of developing countries to mitigation efforts (IPCC, 2018). The current international technology transfer landscape has important gaps, especially in reaching out to LDCs, where institutional and technology capabilities are limited (ibid.). By the same token, lack of international cooperation and delayed short-term mitigation policies and measures increase total economic mitigation costs because stronger efforts will be required to counterbalance the higher emissions in the near term (ibid.).

As the world moves fast into a new era defined by the influence of human activity over climate and environment, countries must intensify efforts to preserve the planet as we know it, especially in the face of incomplete information. Climate data bears a significant degree of uncertainty. For example, measurements of the Earth’s response to climate change continue to be updated. The IPCC warns of several uncertainties, such as the size of the remaining carbon budget,¹⁵ the exact climate response to CO₂ and non-CO₂ emissions, and the feasibility of some unconventional solutions. However, the greater the uncertainty, the more likely it is that we may have already exceeded human and planetary limits with existing carbon emissions, and the greater the urgency to act. Given the prevalence of knowledge gaps and uncertainties, the difficulty of fine-tuning the emissions from complex and interconnected economic sectors, and the long duration and irreversibility of some impacts, it is essential that Governments act on the side of caution. The potential for co-benefits, such as reducing pollution and improv-

Limiting global warming requires mobilizing finance and shifting investment patterns

International cooperation on technology transfer can decrease the cost of mitigating emissions

Acting on the side of caution means acting urgently

¹⁵ A carbon budget is the cumulative amount of carbon dioxide emissions permitted over a period of time to stay within a certain temperature threshold.

ing health and social outcomes, can additionally incentivize climate action and facilitate cooperation.

Governments must act collectively to correct the current global emissions trajectory and aim for global CO₂ emissions to begin to decline well before 2030. Such an ambitious goal can only be achieved through coordination and cooperation at the global level, made even more necessary considering the need to deal with the transboundary impacts of climate change. Scaling up efforts to reduce national emissions beyond the pledged targets should remain a priority. All countries and non-state actors need to strengthen their contributions without delay, through sharing of efforts based on bolder and more committed cooperation, with support for those with the least capacity to adapt, mitigate, and transform (IPCC, 2018). Societal lifestyle and behaviour transformation will also be required, supported by non-state actors such as industry, civil society and scientific institutions.

Time is of the essence. If institutional capacity for financing and governing the various transitions that are required is not urgently built, many countries will lack the ability to change pathways from a high-emission scenario to a low- or zero-emission scenario (ibid.). Strong international cooperation will be decisive in rapidly decreasing greenhouse gas emissions in the next decade.

Overcoming domestic structural challenges

Excessive commodity dependence

Growth laggards and reliance on natural resources

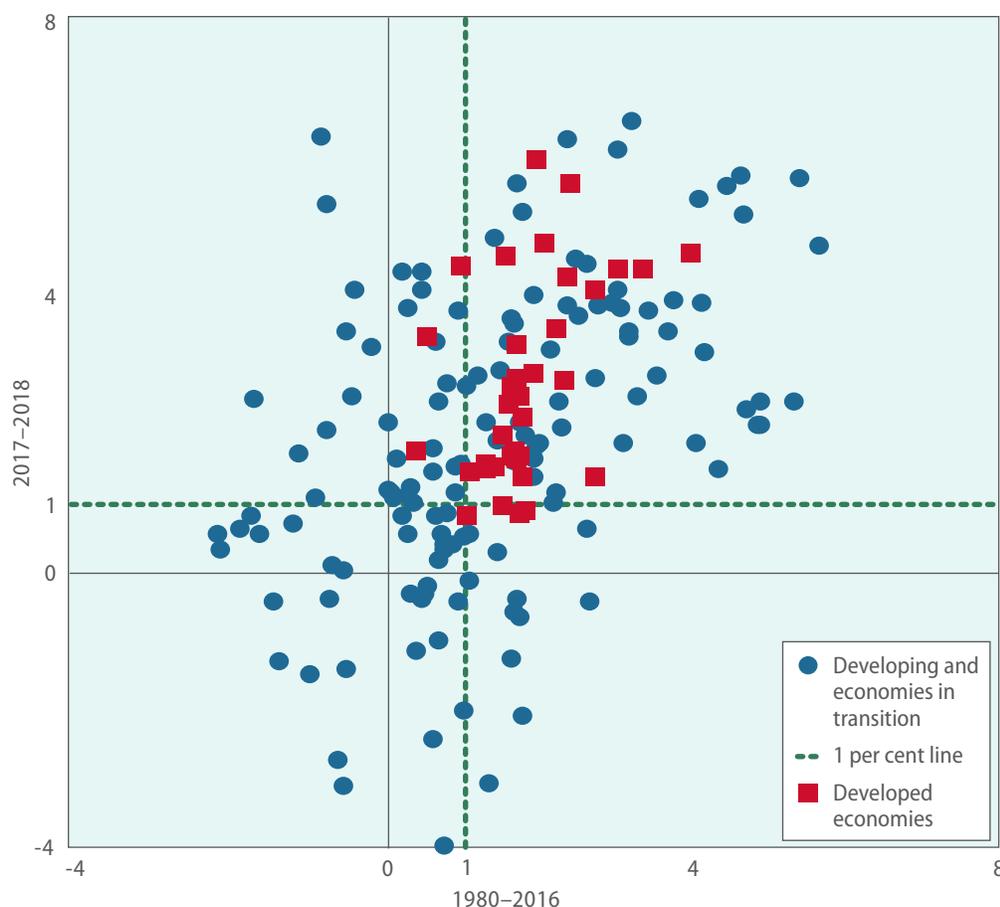
Notwithstanding rising cross-border challenges on multiple fronts, many countries continue to face persistent domestic structural issues that are hindering their sustainable development prospects. The recent strong global growth figures mask some worrying trends in the underlying pattern. Notably, there are a significant number of countries that have not been part of this global upturn and are at risk of falling further behind. If this trend continues, many of the SDGs, including eradicating poverty and hunger, creating decent jobs for all, and ensuring access to affordable and clean energy, will become increasingly out of reach.

In 2017–2018, 29 countries, with a combined population of 610 million, experienced a decline in GDP per capita. In a further 25 countries, GDP per capita expanded at a weak pace of between 0 and 1 per cent. These 54 countries are home to 1.4 billion people, representing about 15 per cent of the global population. Africa hosts 20 of these growth laggards, while the rest are mainly located in Western Asia and Latin America and the Caribbean.

In many of these cases, the low growth seen in the past two years is a continuation of a longer-run trend of weak economic performance. Figure II.7 suggests a positive correlation between a country's recent GDP per capita growth and its historical average growth rates. In 37 of the 54 growth laggards in 2017–2018, GDP per capita growth averaged less than 1 per cent over the period 1980 to 2016 (lower left quadrant of figure II.7). This suggests the existence of significant growth barriers—and in some cases even growth traps—for certain developing and transition economies (Arias and Wen, 2015).

The group of 37 growth laggards contains a heterogeneous mix of countries, with vastly different levels of development. Cross-country growth literature has shown that there is no single factor or set of factors that fully explains why some countries continue to fall behind

Figure II.7
GDP per capita growth 1980–2016 vs 2017–2018



Source: UN/DESA.

others (see, for example, Ciccone and Jarocinski, 2008.)¹⁶ Nevertheless, a closer look at these countries reveals several common features that are posing critical domestic policy challenges. These include high commodity dependence, conflict, weak institutions, as well as widespread poverty and elevated inequality. The following sections focus on analysing some of these characteristics, namely, commodity dependence and poverty and inequality, while also highlighting their close interlinkages with other domestic structural vulnerabilities.

Based on the United Nations Conference on Trade and Development (UNCTAD) definition,¹⁷ 30 out of the 37 countries that are falling behind¹⁸ are considered commodity dependent, with commodity exports accounting for more than 60 per cent of total merchandise exports. For several oil-producing countries, commodity dependence is particularly acute, with fuel exports constituting more than 90 per cent of merchandise exports.

Many of the developing economies that are falling behind depend on natural resources

¹⁶ In the words of Durlauf (2009), “[...] there is no a priori reason to expect cross-country growth behavior differences to reduce to a single major determinant or a very small set of determinants”.

¹⁷ UNCTAD defines a country as commodity dependent when at least 60 per cent of merchandise export earnings are derived from primary commodities such as minerals, ores, metals, fuels, agricultural raw materials and food. For more information, please see the UNCTAD State of Commodity Dependence Report 2016.

¹⁸ This group of countries includes those with GDP per capita growth below 1 per cent in 1980–2016 and below 1 per cent in 2017–2018.

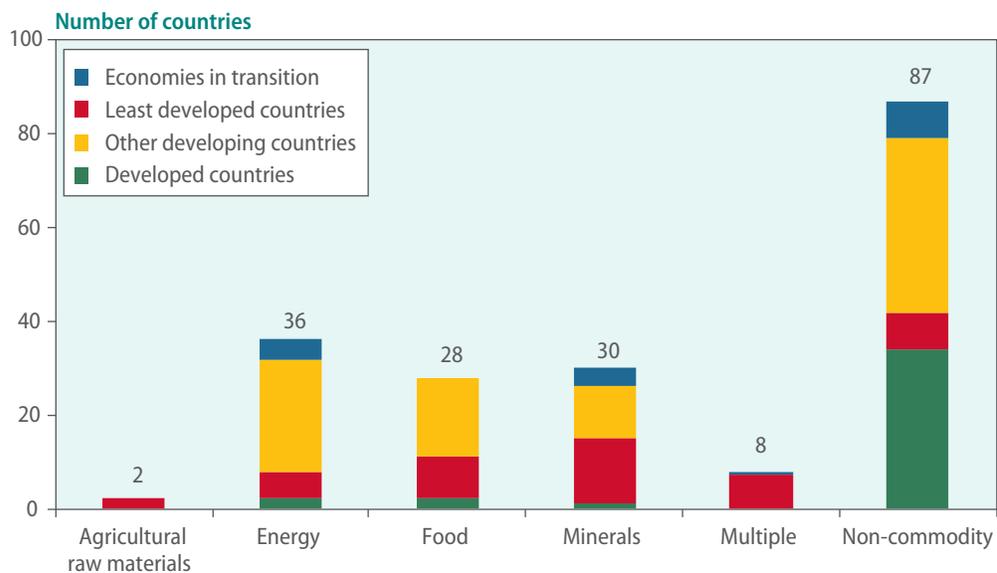
Commodity-dependent countries are subject to volatile global commodity prices

Past empirical studies of the relationship between resource dependence and growth have yielded mixed results (for a recent overview, see Venables, 2016). However, it is widely accepted that countries with an excessive economic dependence on commodities face a unique set of challenges in achieving a strong and stable macroeconomic performance. Figure II.8 shows the type of commodity dependence and number of commodity-dependent countries by country grouping.

One of these main challenges stems from the high sensitivity of these economies to the vagaries of global commodity markets. On the external front, given that global commodity prices (particularly of energy, minerals, ore and metals) are far more volatile than the prices of manufactured goods (figure II.9), export revenues of commodity-dependent countries are highly unpredictable. Furthermore, when commodity prices decline, the negative terms of trade shock can lead to a sharp deterioration in external balances. This can lead to foreign-exchange shortages while putting significant downward pressure on exchange rates, fuelling higher inflation or triggering a balance of payments crisis.

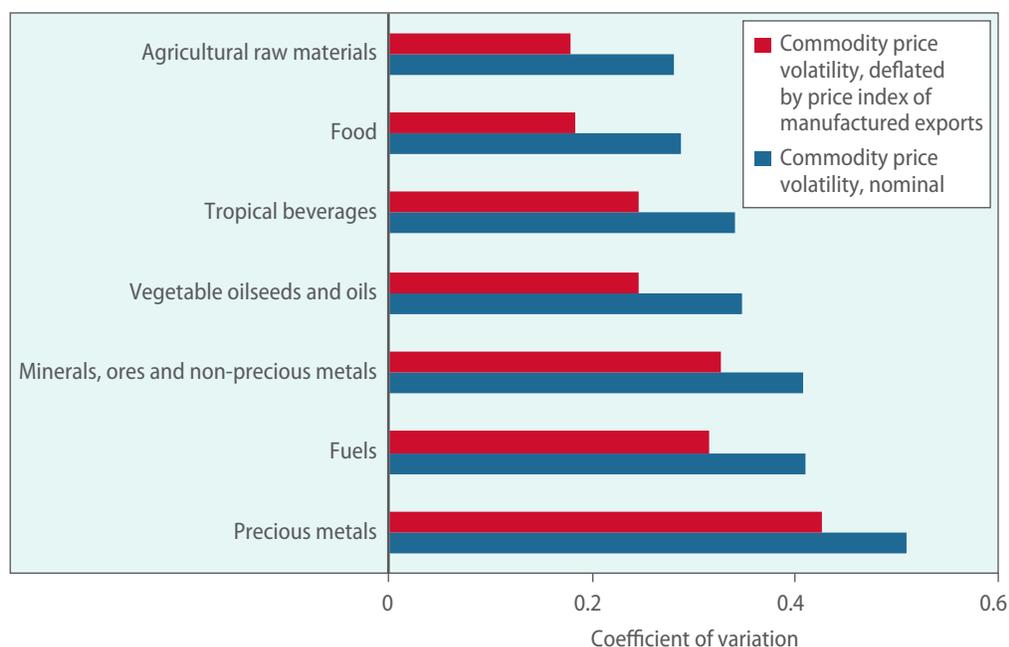
In many commodity-dependent developing countries, a large share of fiscal revenues is derived from the commodity sector (figure II.10).¹⁹ Other more stable sources of government revenue (such as income taxes) are often not well developed. While natural resource rents provide a valuable source of income, they also give rise to a high level of uncertainty, as overall revenues are subject to wide fluctuations. A decline in commodity prices can lead to a sharp rise in fiscal deficits, forcing procyclical spending cuts in investment and social spending. This not only exacerbates a short-term economic downturn, but also constrains the country's medium-term sustainable development prospects. Box II.3 presents a case study of Nigeria, discussing the sharp downward adjustment in the country's growth pros-

Figure II.8
Countries by type of commodity dependence and country grouping



¹⁹ In fuel-exporting least developed countries, the energy sector generally provides more than half of all central government revenue (UNCTAD, 2017d).

Figure II.9
Commodity price volatility between 2000–2017



Source: UNCTAD.

pects in the wake of the commodity price collapse of 2014/15. Furthermore, a deterioration of both current account and fiscal positions is likely to worsen credit ratings, leading to higher borrowing costs and restricting access to finance. In such an environment, risks to debt sustainability are also higher. This often causes a vicious cycle that is only broken when commodity prices increase again.

The combination of high volatility of export and fiscal revenues often translates into high volatility of economic activity. In fact, high commodity price volatility has been shown as an important explanatory factor of low long-term growth in many commodity-dependent economies (Van der Ploeg and Poelhekke, 2009; Bleaney and Halland, 2014). Large swings in commodity prices are also associated with macroeconomic instability, which in turn generates high uncertainty and negatively affects investment and development planning.

In several countries, commodity sectors, particularly in the extractive industries, operate as “enclave” projects, which produce raw commodities for export. These projects create only a limited number of local jobs, without generating many domestic linkages or positive spillovers to the rest of the economy. In such economies, the returns from natural resource wealth are often not shared broadly across society. This is also related to the Dutch Disease phenomenon, where a strong focus on natural resource extraction because of high returns results in the displacement of other productive sectors. The negative effects of high commodity dependence on long-term growth prospects are exacerbated in countries with weak governance and poor institutional quality. In these countries, a larger exposure to corruption and rent-seeking behaviour to gain control of resources not only hinders investment, but also diverts scarce public resources and reduces the availability of resources that are channelled towards development purposes. For example, Mehlum et al. (2006) found a significant negative impact of resource abundance on growth only for countries with poor institutional quality.

Negative effects of high commodity dependence are exacerbated by weak institutions

Box II.3

Nigeria: from economic boom to prolonged slump

Only a few years ago, Nigeria was seen as one of the world economy's brightest spots. The country had weathered the global financial crisis well, continuing the growth trend that had started at the turn of the century. Between 2000 and 2014, real GDP expanded at an average rate of 7.5 per cent per year, faster than in most of the rapidly growing Asian economies, including India, Indonesia and Viet Nam. This strong economic performance gave rise to unbridled optimism, both domestically and in the international community. In mid-2012, an index of consumer confidence showed that 95 per cent of Nigerians felt optimistic about the economy's outlook.^a The International Monetary Fund (IMF) (Article IV, 2012) projected that the Nigerian economy would continue expanding at an exuberant pace of 7 per cent per year between 2018 and 2032. Citigroup Global Markets (2011) even included Nigeria in its list of future "global growth generators," forecasting average annual GDP growth of 9.5 per cent in the period up to 2030.

Today, those rosy projections look completely unrealistic. Hit hard by the oil price collapse of 2014/15, Nigeria fell into recession in 2016, with annual GDP contracting by 1.6 per cent (figure II.3.1). Given a population growth rate of 2.5 per cent per year, this implies a 4.1 per cent decline in GDP per capita. More worrisome is the fact that while oil prices have gradually recovered to \$70–\$80 per barrel, economic activity in Nigeria has remained very weak. In the first half of 2018, GDP grew by a meagre 1.8 per cent. The latest medium-term growth projections by international agencies are also subdued. The forecast of the United Nations Department of Economic and Social Affairs (UN/DESA) foresees annual GDP growth in the range of 2 to 4 per cent over the next decade. The IMF (2018c) is even more pessimistic in its baseline forecast, projecting growth to hover at about 2 per cent between 2018 and 2023.^b

This sharp downward adjustment in Nigeria's growth prospects illustrates how difficult it is to forecast medium-term trends in countries that heavily depend on a single commodity. The collapse in global oil prices in 2014/15 exposed major structural weaknesses in Nigeria's economy, triggering significant fiscal and balance of payments pressures. Several factors help explain why the downturn in economic activity has been so severe and the recovery prospects are so weak.

First, the dependence on a single commodity rendered Nigeria's economy highly vulnerable to external price shocks. In 2014, oil and gas accounted for 91 per cent of merchandise exports and 62 per cent of fiscal revenues. Non-oil revenues stood at only 4 per cent of GDP, one of the lowest rates in the world, due to a narrow tax base, low tax compliance and weak tax administration.

Second, Nigeria's fiscal policy stance was strongly procyclical in the pre-crisis period as high oil prices and the electoral cycle drove spending pressures up (IMF, 2016).^c In 2013, when oil prices were close to an all-time high, the fiscal deficit reached 2.3 per cent of GDP. While the country had mechanisms for countercyclical fiscal policy—an oil-price-based fiscal rule, a savings fund (Excess Crude Account) and a newly established Sovereign Wealth Fund—partisan interests and myopic decision-making hindered the build-up of buffers. As a result, the Government did not have fiscal space to mitigate the downturn in 2015/16 and instead had to tighten fiscal policy.

Third, persistent political uncertainty and violence have been weighing heavily on Nigeria's economy in recent years. In 2016, the country experienced major disruptions to its oil production as militant groups attacked pipelines. Average daily crude oil production fell by 20 per cent between November 2015 and September 2016, amplifying the pressure on fiscal and current account balances.^d Security concerns and political uncertainty (general elections are scheduled for February 2019) remain a significant impediment to investment.

Fourth, Nigeria's initial monetary and exchange-rate policy responses to the balance of payments difficulties were highly ineffective. The combined shock to oil price and oil production put strong downward pressure on the naira and weighed on economic growth. Nigeria's monetary authorities responded by implementing exchange-rate restrictions to maintain the de facto peg to the dollar, while easing monetary policy to support growth. These measures, however, failed to revive economic activity and restore investors' confidence. Instead, they exacerbated the downward pressure on the naira, causing the black-market rate to soar and fuelling inflation. In mid-2016, the central bank changed course, devaluing the naira and lifting interest rates. However, the central bank maintained the system of multiple exchange rates, which lacks transparency and deters foreign investment.

(continued)

^a MasterCard, Worldwide Index of Consumer Confidence.

^b In the IMF baseline scenario, Nigeria would see GDP per capita decline for eight consecutive years.

^c During 2010–2014, many discretionary, ad hoc withdrawals were made from the Excess Crude Account that receives excess oil revenues (or funds shortfalls) relative to the budgeted reference oil price.

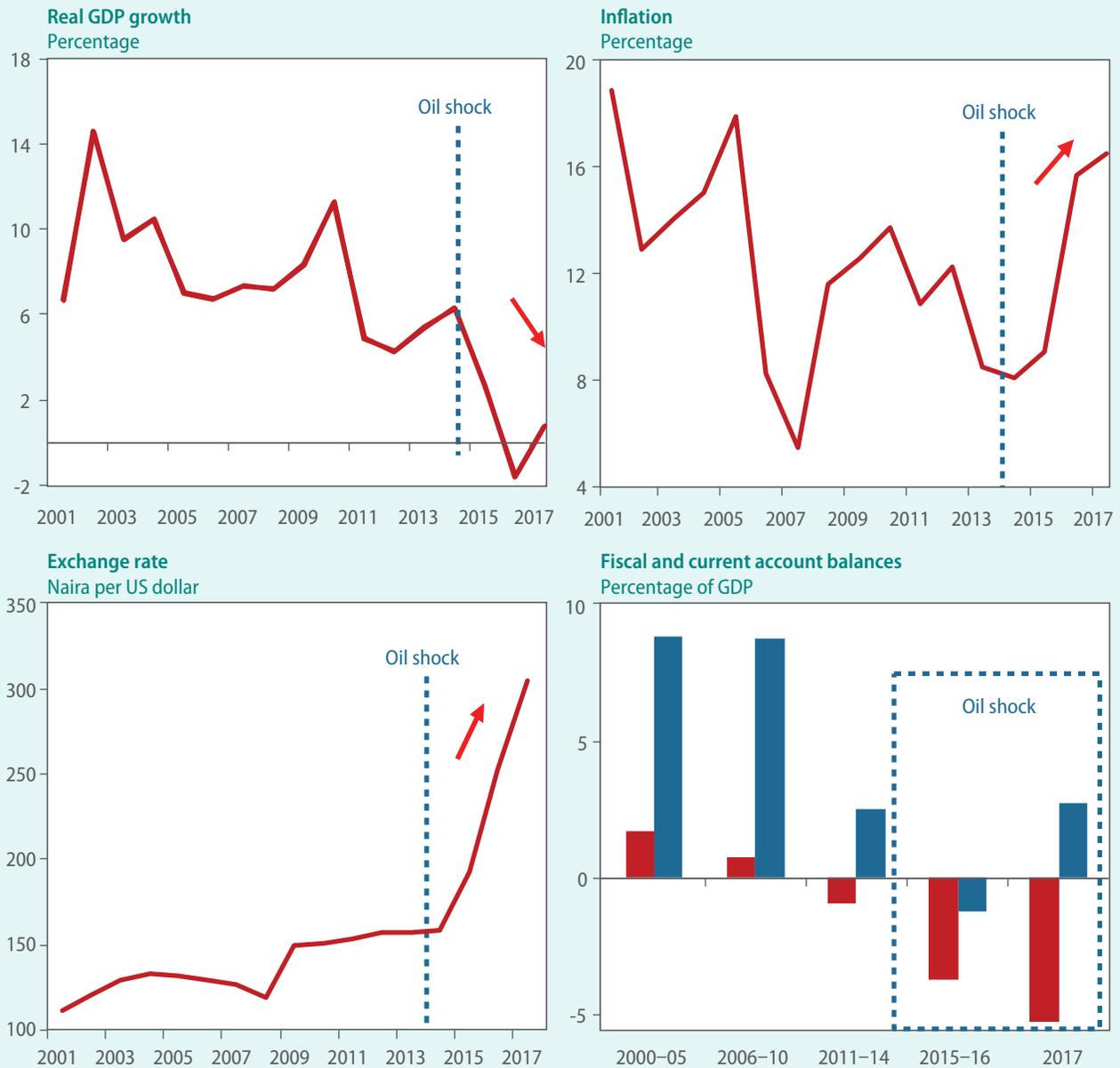
^d Saudi Arabia, in contrast, increased its daily oil production by 7 per cent in the same period.

Fifth, during the boom period of the 2000s, only very limited progress was made in tackling Nigeria's structural obstacles to growth, including significant governance deficits, large gender and regional inequalities, high rates of underemployment (particularly among young people) and severe shortages of infrastructure and energy.

If nothing is done to correct these short- and long-term weaknesses, Nigeria faces the risk of being stuck on a protracted low-growth path. This would have far-reaching implications for the country's pros-

Box II.3 (continued)

Figure II.3.1
Nigeria's macroeconomic indicators



Sources: UN/DESA and CEIC.

(continued)

Box II.3 (continued)

pects to achieve the Sustainable Development Goals. Most importantly, it would make poverty reduction a daunting task. The World Bank estimates that in 2017, almost half of Nigeria's population lived below the PPP-adjusted \$1.90 per capita per day poverty line (World Bank, 2018). The socioeconomic challenges are further magnified by continued strong population growth, which will place immense strains on infrastructure and public services. According to the latest United Nations projections (2017), Nigeria's population will increase from 191 million in 2017 to 264 million in 2030 and 410 million in 2050.

Unleashing Nigeria's immense economic potential and lifting more people out of poverty requires a firm commitment to wide-ranging macroeconomic and structural reforms. The objective must be to strengthen inclusive growth by raising the economy's potential and tackling the existing large inequalities. On the macroeconomic front, key reform objectives include non-oil fiscal revenue mobilization, countercyclical fiscal policy, unification of multiple exchange rates and strengthening of the macroeconomic policy framework.

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(UN/DESA/EAPD).

Figure II.10

Government revenue as a share of GDP in selected commodity-dependent countries, average 2010–2016

Percentage



Source: ICTD/UNU-WIDER Government Revenue Dataset 2018: Merged.

Notes: Resource revenue as a share of GDP refers to total natural resource revenues, including natural resource revenues reported as "tax revenue" or "non-tax revenue". Non-resource revenue as a share of GDP refers to total non-resource revenues from both tax and non-tax sources, including social contributions.

Instability and conflicts appear to be correlated with commodity dependence

Importantly, instability and conflicts appear to be correlated with dependence on commodities, especially in the case of oil and minerals (Collier and Hoeffler, 2004; Humphreys, 2003; Collier, 2007). Among the commodity-dependent countries that have been identified as growth laggards, many have been mired in long-standing armed conflicts or have faced civil unrest and instability in recent decades. These include Afghanistan, the Democratic Republic of the Congo, Iraq, Liberia, the Bolivarian Republic of Venezuela and Yemen. On the one hand, unequal distribution and mismanagement of natural resources can fuel violent conflict; on the other, civil wars are, to a significant extent, funded by natural resources. According to United Nations/World Bank (2018) estimates, 40–60 per cent of intrastate conflicts in the past 60 years have been triggered, funded or sustained by natural resources.

Harnessing natural resource wealth

Countries that are well endowed with resources are not necessarily stuck in a low-growth trap. On the contrary, an abundance of natural resource wealth has the potential to create vast opportunities in an economy. Returns from primary commodity production can provide revenue to support economic diversification, broader access to education and health care, investment in vital infrastructure, and provision of crucial social safety nets. Natural resources can also act as collateral to secure investment finance in many countries that face difficulties in accessing international capital markets.

Overcoming the challenges of commodity dependency and harnessing the development potential of natural resources require a comprehensive long-term development strategy, careful management of resource revenues, and firm policy commitments. In the recent past, several resource-rich countries have developed successful policy strategies that have allowed their economies to benefit immensely from resource wealth (see box II.4 for case studies of Botswana and Costa Rica). Drawing on the experiences of these countries highlights three key policy objectives that commodity-dependent countries need to address, namely, building resilience against volatility, expanding linkages from the commodity sector to the rest of the economy, and developing necessary human and physical capital.

Given the high volatility of commodity prices, commodity-dependent countries should adopt fiscal strategies to build resilience against price shocks. Fostering countercyclical policies—saving windfall commodity revenue when prices are high and raising expenditures to support the economy when commodity prices are low—is an important element. In this aspect, many countries have established revenue stabilization funds as buffers against commodity price fluctuations. Importantly, countercyclical rules must be transparent and institutionalized, so that they are not subject to changes in government, the electoral cycle or other political pressures that may arise. In addition, it is vital to ensure that the returns from natural resources are widely shared across society and directed towards promoting development objectives and productive investment.

Greater diversification of fiscal revenue sources is also an important element of building resilience against volatility. This can be politically challenging in countries with little or no cultural history of direct taxation but is an important aspect of long-term sustainability that includes adequate provision of public services and social safety nets. Clearly, greater economic diversification will also help protect economies against commodity price volatility. This is closely associated with developing linkages between the commodity sector and the rest of the economy.

To create stronger positive spillovers from the commodity sector to the broader economy, countries should prioritize investment geared towards vertical and horizontal diversification. Vertical diversification would include, for example, developing natural resource processing industries, such as smelting and refining of metals and processing of fossil fuels, and industries that use the abundant natural resource as an input to production. Botswana, for example, is pursuing the objective of developing its downstream diamond industry. This includes sorting and valuing of rough diamonds, selling and marketing of diamonds to local companies, and supporting and developing the cutting and polishing industry (Inter-governmental Forum on Mining, Minerals, Metals and Sustainable Development, 2018).

Vertical diversification allows more of the value added associated with the global use of raw materials to be internalized by the commodity-producing countries themselves. However, even after successfully developing refining and processing industries, an economy may still be exposed to commodity price volatility and shifts in global demand. Horizontal

Through effective policy strategies, natural resource wealth can create vast development opportunities

Well-tailored fiscal policies help build resilience against volatility

Forward and backward linkages from the commodity sector should be expanded

Box II.4

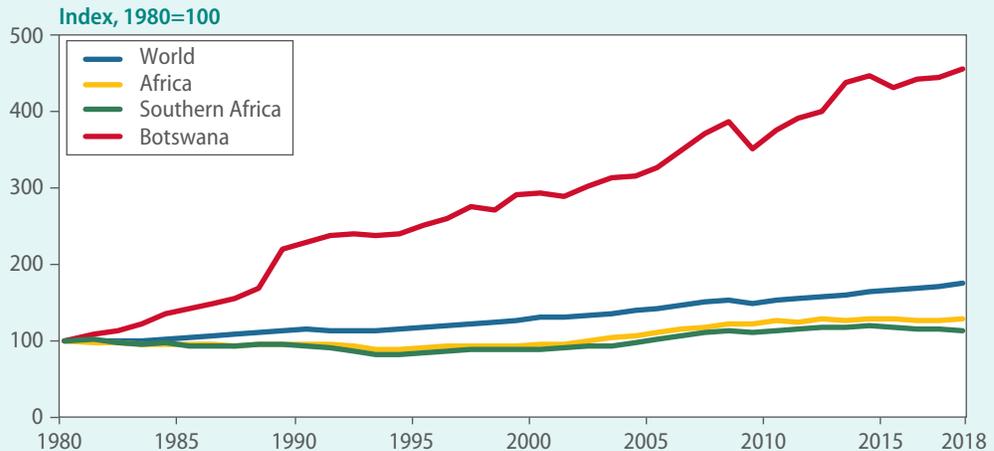
Case studies of successful natural resource management: Botswana and Costa Rica

Botswana

Botswana offers one of the best examples of an economy that has been able to exploit its natural resource sector to advance its development objectives. The passing of the Mines and Minerals Act following independence in 1966 vested subsoil mineral rights in the Government. The Government also renegotiated diamond-mining agreements with foreign investors, thus securing a large share of the revenues. The proceeds were channeled into developing other industrial ventures, as well as into investments in the areas of infrastructure, health and education. To smooth the effects of diamond price fluctuations on the economy and stabilize the planning and execution of investment projects, Botswana has been pursuing a countercyclical policy, for which three funds are crucial: the Stabilization Fund for accumulating assets during boom periods; the Public Debt Service Fund (PDSF) for servicing public debt and extending loans to public enterprises; and the Domestic Development Fund (UNCTAD, 2017e). According to Transparency International (2017), Botswana is the least corrupt country in Africa and has been ranked comparably to several OECD and European countries for decades. Strong and effective legal and policy frameworks have enabled the diamond industry to become an important driver of growth. As a result, the country managed to achieve one of the highest rates of per capita growth in the world (figure II.4.1), developing from one of the poorest countries into a middle-income country within just half a century.

Figure II.4.1

Real GDP per capita trends in Botswana and selected regions



Source: UN/DESA.

Costa Rica

Costa Rica provides an example of a resource-rich country that successfully transformed and diversified its economy. Until the 1980s, the country was heavily dependent on coffee and bananas, with the majority of the workforce employed in agriculture. This implied a strong exposure to market fluctuations and unanticipated drops in commodity prices. To address these resulting challenges, the Costa Rican Government undertook major efforts to diversify its economy both vertically and horizontally: it provided financial incentives to develop non-traditional agricultural export products such as pineapples, of which Costa Rica now is the biggest producer in the world; it created export processing zones (EPZs); it implemented proactive foreign direct investment (FDI) policies to ensure that the strategies of multinational companies are aligned with the country's development priorities, facilitating technology transfer and productive linkages (Mortimore and Vergara, 2004); it supported development of manufacturing and high-tech industries that allowed the country to enter completely new sectors such as chips manufacturing and medical instruments; and it promoted the domestic service sector, in particular the tourism industry, capitalizing on its well-established system of national parks and conservation areas.

diversification can be supported by channelling a fraction of resource revenue to support investment in unrelated sectors.

Developing natural resource industries and enabling economic diversification requires significant investment in both human and physical capital. This poses an important challenge for countries that lack the capacities for this investment, and often rely on foreign investors and companies to undertake costly exploration activities and establish the foundations of such industries. There is often a tendency to offer incentives and tax breaks in order to attract foreign investors who seek short-term returns from resource exploitation. But these short-term gains risk becoming enclave projects and may be to the detriment of a longer-term strategy to maximize the development potential of nascent industries. Expertise in procurement and contract negotiation is critical to ensuring an equitable long-term relationship with foreign or domestic private sector partners. In the example of Botswana in box II.4, one of the keys to the country's success was the renegotiation of contractual arrangements with foreign partners at an early stage. Also essential is the development of labour force skills that are needed to maintain and develop the industry, so that the returns can be more broadly shared.

Despite the potential for natural resource wealth to promote economic growth and development, excessive commodity dependence, for the most part, remains an obstacle to development. Releasing this potential requires a comprehensive approach to commodity management embedded within a broad development strategy. Key elements include strengthening institutions, increasing transparency, developing countercyclical policies, economic and fiscal diversification, and targeted investment in human capital.

Poverty and inequality

The goal of eradicating poverty by 2030

The upturn in global economic growth since mid-2016 presents an opportunity to accelerate progress towards the SDGs. However, faster GDP growth alone will not lead to broad-based improvements in living standards and shared prosperity. The mantra that “a rising tide lifts all boats” has been widely refuted (see, for example, Stiglitz, 2002). In many countries around the globe, widening socioeconomic inequalities since the 1980s have hindered progress in poverty reduction and shared prosperity.

Thanks to the successful experiences in China and other Asian countries, the share of people living in extreme poverty has declined steadily and significantly over the past few decades. However, despite this progress, there are currently more than 700 million people worldwide who live below the extreme poverty line of \$1.90 per day (in 2011 purchasing power parity). More than half of them live in sub-Saharan Africa, which has experienced only a moderate decline in poverty rates since the 1990s.

Achieving the goal of eradicating poverty by 2030 (SDG 1) will require a combination of strong and sustained growth in average incomes and significant reductions in inequality. While developing countries have made some headway against inequality, much more fundamental transformations are needed going forward. Baseline scenarios, using the World Economic Forecasting Model (WEFM) and extending the current short-term forecasts, vividly illustrate the magnitude of the challenges that lie ahead. The results underscore the necessity of combining rapid economic growth with strong declines in income inequality.

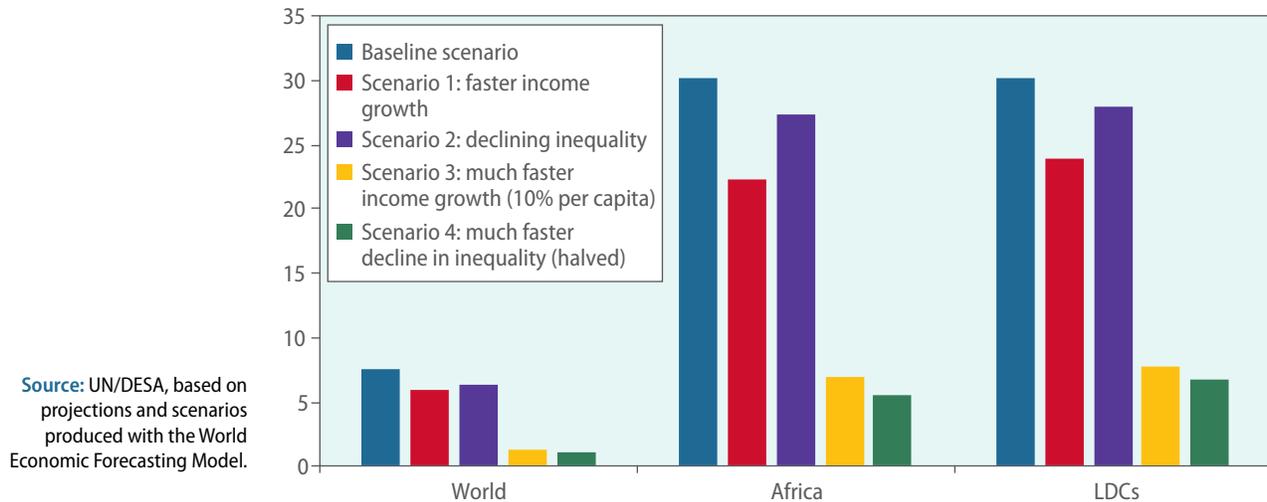
The scenarios for poverty headcount ratios illustrated in figure II.11 rely on two key inputs: a projection for the total level of household income in the economy, and the way

Natural resource management can be improved through investing in human and physical capital

More than 700 million people worldwide currently live in extreme poverty

Nearly 30 per cent of the population in Africa and in LDCs may remain in extreme poverty in 2030

Figure II.11
Extreme poverty headcount ratios, scenarios for 2030



that income is distributed across the population.²⁰ In the baseline scenario—which can be viewed as the most likely outcome in the absence of a significant shift in productivity, economic policy or consumer behaviour—the first input is derived as a model-based extension of the current short-term forecasts underpinning this report. The second input assumes that the distribution of income—or the degree of inequality—remains constant within a country over the forecast horizon to 2030. These baseline projections suggest that more than 7 per cent of the global population may remain in poverty by 2030. About 30 per cent of the population in Africa and in the LDCs would be expected to remain in extreme poverty under this scenario, constituting a serious shortfall in global ambitions.

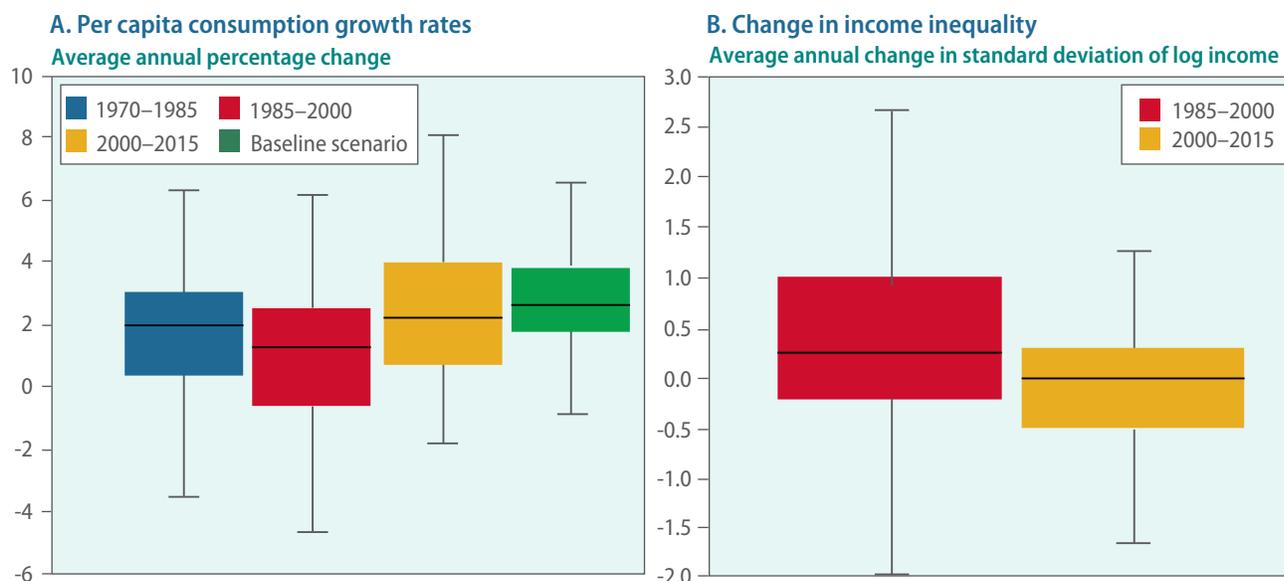
What needs to change to achieve the goal?

Prospects for poverty rates under some alternative scenarios for growth and inequality are also illustrated in figure II.12. The first scenario considers a more rapid rise in incomes relative to the baseline projections. Average income growth is increased to at least 4 per cent per year (where the baseline projections exceeded 4 per cent, the growth rate is left unchanged). This benchmark figure of 4 per cent is derived as an “optimistic” scenario based on the distribution of growth rates across countries in the period 2000–2015. Over this period, in half of the countries in the sample consumption per capita²¹ expanded at an average annual rate of between 0.8 and 3.9 per cent (figure II.12.A). Holding inequality constant, raising per capita growth to at least 4 per cent would bring poverty rates in Africa and the LDCs down to 22–23 per cent by 2030—still considerably off target.

²⁰ Additional technical assumptions: (i) following the World Bank methodology to estimate poverty rates in non-survey years, the mean of the income distribution is assumed to evolve in line with aggregate consumption per capita, adjusting for the historical discrepancy between the two; (ii) the distribution of income is approximated as lognormal, which holds relatively well for most countries, but in some cases the actual data is more skewed or erratic.

²¹ Consumption per capita is used as a proxy for average household income. In practice, household surveys underlying Gini coefficients and other inequality measures are often derived from consumption expenditure distributions rather than income distributions.

Figure II.12
Distributions of per capita consumption growth and inequality change across countries



Source: UN/DESA calculations, based on data from Global Consumption and Income Project.

Note: Distributions across 176 countries (panel A) and 145 countries (panel B). Central lines indicate the median, boxes indicate range of 50 per cent of observations around the median, and endpoint of whiskers indicate the range of 95 per cent of observations.

The second scenario maintains income growth from the baseline scenario but allows inequality to decline. The magnitude of decline is calibrated as an optimistic scenario, based on historical changes in inequality over the period 2000–2015, as illustrated in figure II.12.B. The measure of inequality used—the standard deviation of the log of income—is allowed to decline by 0.5 per cent per year. Under this scenario, poverty rates decline to about 27 per cent in both Africa and the LDCs—a significant but nonetheless limited improvement. Combining scenarios one and two (consumption per capita growth of at least 4 per cent per year and an annual decline in inequality of 0.5 per cent) would bring poverty rates in Africa below 20 per cent. While this would mean that 240 million fewer people would remain in extreme poverty compared to the baseline scenario, it nonetheless falls well short of the goal to “leave no one behind”.

The third and fourth scenarios consider more radical departures from historical behaviour. Scenario 3 illustrates the prospects for poverty reduction when average income growth rises to 10 per cent per year. Scenario 4 illustrates the prospects under a dramatic decline in inequality that essentially halves the level of inequality in each country.²² Under both scenarios, global poverty rates fall to close to 1 per cent, while in Africa and the LDCs rates of extreme poverty drop to 5–8 per cent. Reaching progress on this scale demands a step change in both the rate of economic growth and the level of income inequality. In Africa, where the population is expanding at a rate of more than 2 per cent per year, GDP growth needs to rise to double-digit levels to ensure per capita consumption rates reach the levels needed. This is well beyond growth rates recorded over the last 50 years. Historical changes in inequality—which averaged 0 over the 15 years from 2000 to 2015 in the major-

Eradicating poverty by 2030 will require both double-digit growth in Africa and steep reductions in income inequality

²² Median income growth in the scenario is the same as in the baseline scenario.

ity of countries and deteriorated over the previous 15-year period—are also clearly woefully inadequate as a guide for the improvements needed over the coming decade.

How do we get there?

The scenarios offer some insights into the scale of the challenges ahead. The crucial message is that the current rate of progress in poverty reduction is far below what is needed to eradicate poverty by 2030. Integrated and cross-cutting policy measures that both raise prospects for economic growth and reduce income inequalities are essential to shift the world economy towards a more sustainable and inclusive path. This includes, for example, investing in areas such as education, health care, resilience to climate change, and financial and digital inclusion—all of which support economic growth and job creation in the short-term, while promoting sustainable development in the long term.

Reaching growth targets will require well-targeted investment

Reaching double-digit growth in Africa will require a significant rise in well-targeted investment. Investment levels currently stand at about 25 per cent of GDP in Africa but need to increase towards 30 per cent of GDP to both spur the short-term growth needed and lay the foundations for strong productivity growth over the medium term. Many states must double current levels of infrastructure investment to meet basic infrastructure needs, including delivering electricity, clean water, health care and education, and to facilitate economic diversification and trade.

Securing the finance to sustain a steep escalation in investment poses an enormous challenge. Debt levels are high and rising. As of 1 November 2018, 30 low-income countries were considered in or at high risk of debt distress, according to the methodology established by the World Bank and IMF.²³ Mobilizing resources via private sector involvement, tax revenues, remittances, and tapping into excess liquidity in commercial banks must be complemented by strengthened international tax cooperation and efforts to combat illicit financial flows, as discussed above. Above all, long-term strategic planning is needed to make the most valuable use of limited resources.

Faster GDP growth alone will not be sufficient to meet SDG targets

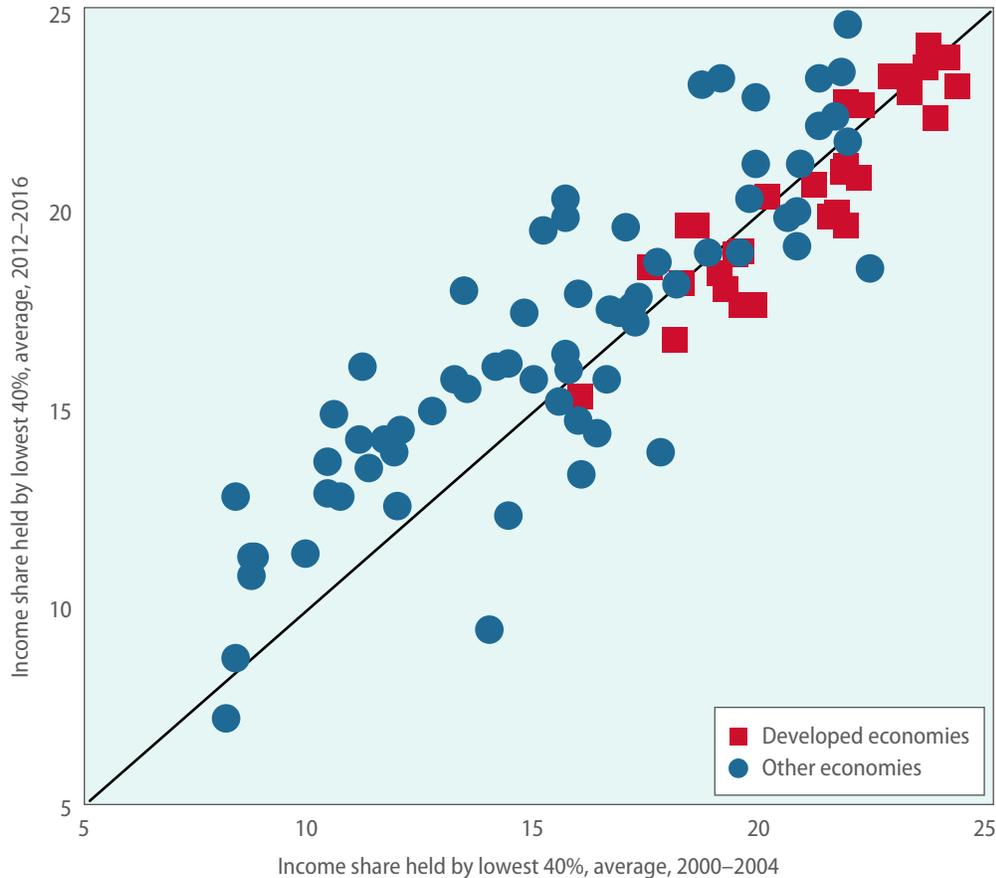
Faster GDP growth alone will not be sufficient to deliver the improvements in living standards and shared prosperity envisaged in the 2030 Agenda for Sustainable Development. Substantial declines in socioeconomic inequality are also needed. The period 1980–2000 was characterized by a broad-based increase in within-country inequality. The picture has since become more heterogeneous. This is illustrated in figure II.13, which depicts the income share held by the bottom 40 per cent in 2000–2004 and 2010–2016, using World Bank data. In most developed countries, income inequality has continued to widen further. By contrast, disparities appear to have narrowed in the majority of developing countries—albeit often only modestly and from very high levels, well above those prevailing across developed countries.

It is important to note that the World Bank's data on inequality is based exclusively on national income or expenditure household surveys. Such surveys often fail to adequately capture the incomes at the top of the distribution, leading to an underestimation of income inequality (Atkinson, 2007; World Inequality Lab, 2018). In an effort to correct this shortcoming, the *World Inequality Report* uses a new dataset that combines household survey data with fiscal data coming from taxes on income.²⁴ As expected, the report finds significantly higher levels of inequality than analyses based on World Bank data, but the qualitative trends are

²³ See <https://www.imf.org/external/Pubs/ft/dsa/DSAlist.pdf>.

²⁴ While this approach allows for a more complete and accurate picture of the incomes at the top, the country coverage is much more limited compared to the World Bank.

Figure II.13
Income share held by the lowest 40 per cent of the population in income distribution, 2000–2004 vs 2012–2016



Source: UN/DESA, based on data from World Bank's World Development Indicators database.

Note: The sample includes 109 countries for which data is available.

largely the same. Although there have been modest improvements since the turn of the century in parts of the Middle East, Latin America and the Caribbean, and sub-Saharan Africa, inequality levels remain very high.

Given that high levels of inequality are a major barrier to achieving the SDGs, urgent policy action is needed. There are no one-size-fits-all recommendations, but the recent experiences in various developing regions offer valuable lessons and can help identify key areas of reform.²⁵ From a macroeconomic perspective, the experiences in Latin America and the Caribbean and sub-Saharan Africa in particular underscore the importance of macroeconomic stability and a strong development-oriented policy framework, including a well-functioning and robust financial system (see box II.5 for a discussion of the linkages between financial sector development, growth and inequality). Fiscal policies play a particularly important role in promoting inclusive development, not only by helping to smooth the business cycle, but also by providing public goods, correcting market failures and directly

Fiscal policy plays a crucial role in inclusive development

²⁵ Several recent studies by international organizations have examined inequality trends and policy responses from a global, regional and national perspective. See for example, World Bank, 2016; ESCAP, 2018; United Nations Development Programme, 2017; ECLAC, 2018c; Inter-American Development Bank, 2016.

influencing the income distribution. While more efficient tax collection and administration can help generate additional revenues, it is equally important to improve the efficiency and quality of public expenditure. In this context, moving away from regressive and inefficient blanket subsidies (for fuel, for example) towards better targeted spending is needed. In addition, in many countries, there is room to make the tax system more progressive, for example by expanding direct taxation, raising top personal income tax rates, and closing loopholes. As shown by Lustig (2017), in several middle-income countries fiscal income redistribution is currently very limited, much lower than in developed countries. In part, this can be attributed to the dominance of consumption taxes and low levels of spending on health and education. Recent declines in inequality in both Latin America and East Asia have been associated with an increase in targeted government transfers to households, demonstrating the potential for more effective fiscal interventions.

Education, employment policies and rural infrastructure are central to reducing inequality

Key components of a strategy to promote economic inclusion are education and employment policies. Closing education gaps through enhancing access to education is vital in this respect. For many developing countries that have made great strides in moving towards universal primary and secondary education in recent decades, a main challenge is to strengthen the quality of public education. Vocational training programmes can help to upskill the workforce, improving labour market opportunities and productivity. Recent experiences in East Asia and Latin America have shown that introducing or raising minimum wages and expanding social protection systems can help lift the living standards of the lowest income earners.

Prioritizing rural infrastructure development can also alleviate poverty and narrow the rural-urban divide. Public investment in the areas of transport, agriculture and energy can boost medium-term productivity, translating into higher wages and incomes in marginalized regions. In East Asia, the implementation of large infrastructure plans has contributed to reducing poverty in the short term by generating jobs for low-skilled and migrant workers.

Box II.5

Finance, growth and inequality

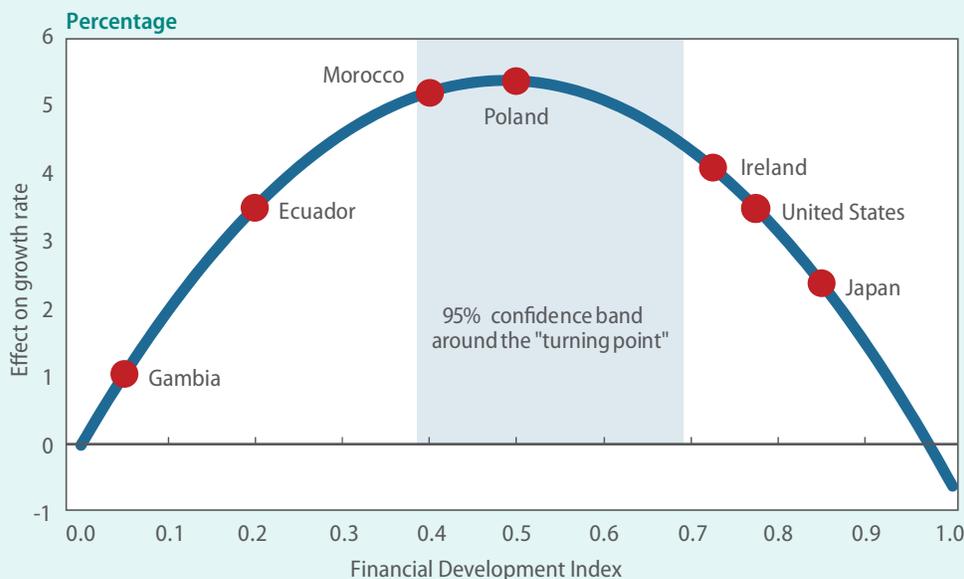
The primary function of the financial sector is to intermediate funds from savers to investors. By allowing savers to diversify risk, financial systems should facilitate productive investment, which can boost growth prospects. The linkages between financial sector development and GDP growth have been established in the literature since the 1990s.^a Since then, the size of the financial sector has grown significantly in both developed and developing countries, often much more rapidly than the overall economy (UNCTAD, 2017f).

Recently, there have been an increasing number of discussions about the negative effects that can result from an overly developed financial sector. In this context, there is a need to distinguish financial depth (the size of the financial sector relative to the economy) from financial breadth (the population's access to different segments of the financial sector). While an improvement in access to financial services should benefit the poor, there are concerns over whether the benefits of greater financial deepening eventually level off. There are also growing concerns over whether high levels of "financialization"—defined as the increase in size and influence of financial markets and institutions in the overall economy—could exacerbate inequality.

Figure II.5.1 illustrates this nonlinear relationship between further financial sector development and economic growth,^b while holding other growth determinants constant. Based on data from 128 countries in the period 1980–2013 (Sahay et al., 2015), there is a bell-shaped relationship between financial development and economic growth. The results show that for countries at a low stage of financial sector development, further financial deepening has strong positive effects on growth.

Figure II.5.1

Relationship between financial development and economic growth



Source: Sahay et al. (2015).

However, the data show that at higher stages of financial sector development, the gains to growth from further financial development reach a plateau, and eventually start to decline. Although there is not a single inflection point that applies to all countries, one study found that when private credit reaches about 100 per cent of GDP, the impact of further financial sector development on growth can turn negative (Berkes, Panizza and Arcand, 2012), alongside an increase in volatility (Easterly, Islam and Stiglitz,

^a See for instance, Levine (2005).

^b Financial development is measured by an index that combines data on financial institutions and financial markets in terms of depth, access and efficiency. See Čihák et al. (2012).

(continued)

Box II.5 (continued)

2000). Greater financial deepening, rather than financial access, has been identified as the driver of this weakening effect on growth. This can be due to several factors, including financial crises preceded by credit booms (Jordà, Schularick and Taylor, 2011); funds allocated to speculative bubbles instead of productive assets; or diversion of talent towards financial services and away from other economic sectors (Tobin, 1984).

Such limits to growth depend, *inter alia*, on the quality of a country's regulatory framework. High-quality regulation can help broaden access to credit without jeopardizing financial stability. Financial development that occurs at a pace that is too rapid may also generate higher instability. Likewise, the composition of finance is important. Credit to businesses has been found to be more growth friendly than credit to households (Sahay et al., 2015).

Financial sector development also affects income distribution, although empirical studies have produced mixed results surrounding the nature of this relationship. On one hand, there is evidence that financial development, measured as private credit to GDP, benefits the poor disproportionately and reduces income inequality. This is because a more developed financial system can better address market imperfections, such as information asymmetry between lenders and borrowers. For the poor, this helps alleviate credit constraints that may be imposed because of their lack of collateral and credit history (Beck et al., 2007). Better access to financial services also helps people escape poverty by encouraging savings while lessening the effects of financial shocks, such as job losses and crop failures. Realizing these benefits, countries have tried to promote greater financial inclusion.^c Considerable progress has been made in this area, notably due to the proliferation of mobile banking technology. Yet, 1.7 billion adults remain unbanked compared to 2.0 billion in 2014 (Demirgüç-Kunt et al., 2018).

On the other hand, the 2008/09 global financial crisis highlighted the role of excess financialization in generating higher instability and widening inequality. For example, high inequality can lead to the build-up of financial vulnerabilities.^d Workers with stagnant wages may be willing to take on more credit to maintain or improve their standards of living. This may result not only in an unsustainable build-up of debt, but also a deterioration in the overall quality of bank assets, increasing the risk of a financial crisis. High income inequality may also generate excess savings in the economy as the wealthy tend to save proportionally more than low-income households. In the past, these savings have sometimes led to excessive risk-taking.

A widespread and prolonged period of excessive risk-taking can lead to financial crises, which may widen inequality. The global financial crisis caused wealth declines across all socioeconomic groups, but the decline, in percentage terms, was greater for less-advantaged groups (Pfeffer et al., 2013). While top earners experience a sharp fall in asset values, the impact of a crisis on the poor tends to be more painful as unemployment rises. In the aftermath of a crisis, lower tax revenues and policy interventions—such as measures to rescue “too-big-to-fail” banks—contribute to a decline in fiscal space and may prompt Governments to roll back on redistributive policies that aim to address income inequality.

Greater financialization can also coincide with some degree of regulatory capture. For example, a larger financial sector may be capable of influencing policymaking in its favour and weakening policies that foster more equal income distribution (e.g., promoting fiscal austerity and limiting minimum wages). This may have contributed to the decline of labour income shares in many countries and an increase in income inequality (figure II.5.2).

Well-functioning financial systems are vital in supporting capital accumulation and productivity growth. Nevertheless, countries need to be cognizant of the risks of over-financialization as they progressively develop domestic financial markets. Since developing countries have relatively smaller financial systems compared to developed economies, the risks emanating from an oversized financial sector are likely to be more limited and these countries can reap significant growth and stability benefits from further financial sector development. More developed countries, by contrast, may benefit from a smaller financial sector.

Importantly, financial supervision and regulation must keep up with efforts to deepen or liberalize financial systems. Effective and appropriate regulation and supervision is critical for all countries, notably to identify and contain systemic risks. This is challenging, especially for countries with limited capacities. Investment incentives also need to change to avoid rewarding short-termism and speculation.

^c For example, at least 58 developing countries have adopted or are in the process of developing national strategies to accelerate the level of financial inclusion. See Alliance for Financial Inclusion (2015).

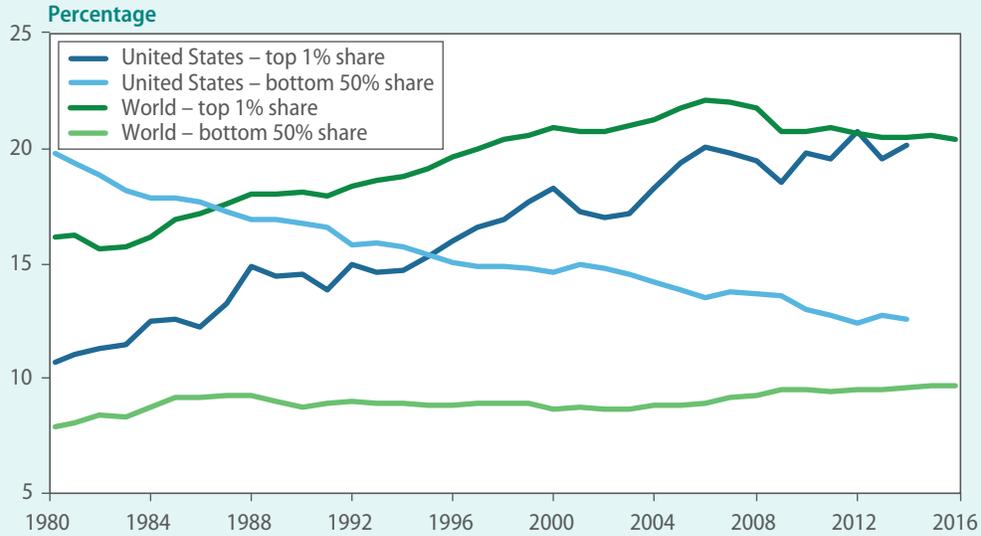
^d See UNCTAD (2017f) and Kumhof et al. (2015).

(continued)

Figure II.5.2

Share of pre-tax national income in the United States and the world

Box II.5 (continued)



Source: World Inequality Database.

In addition, policymakers need to have a deeper understanding of the linkages between inequality, financial stability and crisis. Reducing inequalities, through enhancing social protection systems for instance, may reduce the risk of future crises, while ensuring financial stability can mitigate future inequalities.

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