

WORLD TRADE REPORT 2024

Trade and inclusiveness

How to make trade work for all



What is the World Trade Report?

The World Trade Report is an annual publication that aims to deepen understanding about trends in trade, trade policy issues and the multilateral trading system.

What is the 2024 Report about?

The 2024 World Trade Report explores the complex interlinkages between trade and inclusiveness across and within economies, and discusses how trade policies need to be complemented by appropriate domestic policies to make the benefits of trade more inclusive.

Find out more

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ABBREVIATIONS

AGOA	African Growth and Opportunity Act
AI	artificial intelligence
EIF	Enhanced Integrated Framework
FAO	Food and Agriculture Organization of the United Nations
FDI	foreign direct investment
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GPA	Agreement on Government Procurement
GSP	Generalized System of Preferences
GVC	global value chain
ICT	information and communications technology
IEA	International Energy Agency
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
IFD	Investment Facilitation for Development
ILO	International Labour Organization
IMF	International Monetary Fund
IP	intellectual property
ISO	International Organization for Standardization
IT	information technology
ITU	International Telecommunication Union
LDC	least-developed country
MFN	most-favoured nation
MNE	multinational enterprise
MSME	micro, small and medium-sized enterprise
NFTC	national trade facilitation committee
NTM	non-tariff measure
PPP	purchasing power parity
OECD	Organisation for Economic Co-operation and Development
R&D	research and development
RS	responsible sourcing
RTA	regional trade agreement
S&DT	special and differential treatment
SCM	subsidies and countervailing measures
SEZ	special economic zone
SOE	state-owned enterprise
SPS	sanitary and phytosanitary
STDF	Standards and Trade Development Facility
SVE	small, vulnerable economy
TBT	technical barriers to trade

TFA	WTO Trade Facilitation Agreement
TRIMs	Trade-Related Investment Measures
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UN	United Nations
UNCTAD	UN Trade and Development
UNEP	UN Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-ESCAP	UN Economic and Social Commission for Asia and the Pacific
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WOAH	World Organisation for Animal Health
WTO	World Trade Organization

FOREWORD BY THE WTO DIRECTOR-GENERAL



The mission of the World Trade Organization, as set out in the preamble to its founding Marrakesh Agreement, is to use trade as a means to raise living standards, create jobs and promote sustainable development. As we mark the WTO's 30th anniversary, it is clear that members have used the open and predictable global economy anchored in WTO rules and norms to accelerate growth and development, with enormous positive impacts for human well-being. At the same time, many people and places have not shared adequately in these gains.

This year's edition of the *World Trade Report*, titled "Trade and Inclusiveness: How to make trade work for all", looks at how the world has been transformed through trade – and at how we can use trade and other policies to improve the lives and livelihoods of people who remain on the margins of the global economy.

Perhaps the biggest takeaway from the report is its reaffirmation of trade's transformative role in reducing poverty and creating shared prosperity – contrary to the currently fashionable notion that trade, and institutions like the WTO, have not been good for poverty or for poor countries, and are creating a more unequal world.

But the second biggest takeaway is that there is much more we can do to make trade and the WTO work better for economies and people left behind during the past 30 years of globalization.

The report describes how, over the past three decades, open global markets, underpinned by the WTO, gave rise to a boom in trade, enabling the productivity gains that came with greater

specialization, scale and competition. Lower-priced imports lifted household purchasing power, especially at the bottom of the income distribution. As more developing economies reformed at home and tapped into external demand for goods and services, their share in global trade increased sharply. With strong income growth in low- and middle-income economies, the proportion of their populations living in extreme poverty fell from 40 per cent in 1995 to under 11 per cent in 2022. China was only part of this story: take it out of the equation, and the poverty rate in low- and middle-income economies declined from 36 per cent in 1996 to under 14 per cent in 2022. Never before have the living conditions and prospects of so many people improved so rapidly.

During this period, for the first time since the Industrial Revolution two centuries earlier, poor countries began to narrow the per capita income gap with rich ones – until the COVID-19 pandemic halted this convergence by hitting the weakest economies hardest.

Analysis showcased in this report shows that trade policy reforms played an important role in this growth story. Trade cost reductions increased global real GDP by 6.8 per cent between 1995 and 2020 – and by 33 per cent in low-income economies. Economies that took on more reform and liberalization commitments as part of their WTO accession negotiations saw a 1.5 percentage point boost to their annual growth rates, and also attracted more capital investment.

And yet many poor countries, particularly in Africa, Latin America and the Middle East, remained on the margins of global trade, and were lagging behind on income convergence even before the pandemic.

In some rich countries, many people felt left behind, unable to benefit from new opportunities – and their frustration fuelled a political backlash against international trade.

This report looks in detail at the various factors that have held back individuals, firms and economies from capitalizing on, and adjusting to, international trade. These range from high trade costs that constrain countries' access to foreign markets or cheap inputs, to the mobility and information frictions, skill mismatches and limited access to finance that, too often, prevent people from seizing new opportunities.

The report finds that trade is part of the solution to making the global economy more inclusive – but also that trade policy alone is insufficient to achieve this goal.

Protectionism, the report demonstrates, is not an effective path to inclusiveness: restricting trade is typically an expensive way to protect jobs for specific groups within society, and can raise production costs, while inviting costly retaliation from disgruntled trading partners.

A more promising path towards a global economy that works for everyone lies in what we at the WTO have been calling “re-globalization” – bringing more economies and communities from the margins to the mainstream of the global economy by helping them attract more trade-oriented investment. Fast-growing trade in digitally-delivered services and environmental goods offer exciting opportunities, with digital trade in particular lowering the bar for enabling underrepresented economies, small businesses and women entrepreneurs to connect to international markets. In an era when global supply chains have exhibited some vulnerabilities, deconcentrating and diversifying them to business-friendly but underrepresented regions and economies can be part of fostering inclusiveness, while also building global resilience.

The WTO remains a cornerstone for international trade cooperation, and new and prospective rules in areas such as investment facilitation for development, services domestic regulation and digital trade promise to advance the re-globalization process. But a key finding of this report is that rules for open and simplified trade are not enough to support inclusiveness between and within economies – they need to be complemented with other policies at the domestic and international levels.

For example, while global rules for digital trade at the WTO would create new commercial opportunities in the sector, extending the reach of those opportunities to everyone who could benefit would require action

to close the digital divide, with investments in digital connectivity, infrastructure and digital skills, as well as in creating an enabling legal and regulatory environment.

More broadly, countries need to act to ensure that as many of their citizens as possible can benefit from the opportunities created by open and rules-based international markets – or are, at least, cushioned against the downsides of economic change, whether these are due to technological change or to increased import competition. This means investing in education and infrastructure, maintaining an appropriate competitive environment, implementing effective adjustment and redistribution policies including active and passive labour market support, avoiding a race to the bottom on taxation, and so forth.

The report makes the case that enhanced coherence across international organizations would magnify their collective impact on inclusiveness. At the WTO, we recognize these interlinkages, and have been working with partner international organizations to this end. For instance, the WTO and the World Bank have launched the “Digital Trade for Africa” project to support African economies' efforts to build the necessary hard and soft infrastructure to take advantage of digital trade opportunities. The WTO and the International Trade Centre have launched a US\$ 50 million global fund for women exporters in the digital economy. Further collaborative efforts could range from simple information exchanges to formal partnerships.

I hope that readers – and especially, policymakers – will take to heart the lessons from this report. Maintaining open and predictable rules-based trade should be part of any country's path to greater inclusiveness. There is no substitute for complementary domestic policies: to make trade work for more people, the wider economy needs to work for everyone. And we need strong and renewed political support for multilateral cooperation to make trade work for all.



Dr Ngozi Okonjo-Iweala
Director-General

EXECUTIVE SUMMARY

Never before have the living conditions and prospects of so many people changed so dramatically in the space of a few decades. Since the establishment of the WTO 30 years ago, the world has witnessed a period of unprecedented income growth and convergence, as the wide gap in income levels between economies has narrowed. Between 1995 and 2023, global per capita income, adjusted for inflation, increased by approximately 65 per cent, while the per capita income of low- and middle-income economies almost tripled. This impressive economic growth has significantly contributed to reducing poverty, malnutrition and infant mortality, and has improved access to education, healthcare and electricity. A rapid expansion in international trade was a major factor in this impressive economic growth.

Recent debates about trade, development and inclusiveness have sometimes minimized or overlooked these achievements. Growing concern about income inequality levels, which remain high in most economies, have led some to argue that globalization is detrimental to development and inclusiveness because it favours wealthy economies and individuals, leaving marginalized groups and regions behind. Recent crises, such as the COVID-19 pandemic, revealed genuine vulnerabilities in supply chains, and fuelled perceptions that globalization exposes economies to excessive risks. Despite the remarkable poverty reduction of recent decades, a staggering 712 million people worldwide still live in extreme poverty.

Against this backdrop, the World Trade Report 2024 examines how international trade and trade policies contribute to making the global economy more inclusive. While trade has played a crucial role in promoting global economic convergence and reducing poverty, some individuals, regions and economies have been left behind by not being able to benefit to the same extent from trade. The report analyses how trade and trade policy can be part of the solution to make trade and the global economy more inclusive.

Integrating open trade with other key policy areas is essential to spread the benefits of trade to all. At present, trade does not always benefit everyone; this is not solely due to trade policies, but often to domestic policies as well. The Report's main conclusion is that reducing trade would diminish opportunities for growth and inclusiveness, but relying

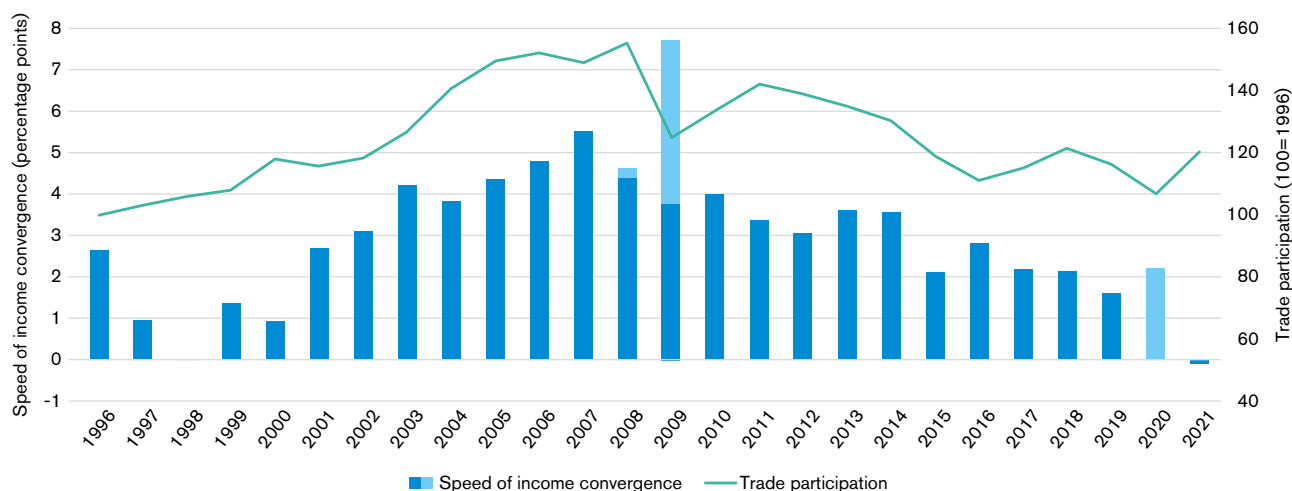
solely on trade and trade policy would not fully capture these opportunities. Complementary domestic policies are required to make trade more inclusive. Significant progress can be made at the national level to enhance the effectiveness of national policies for economic growth and inclusiveness, but international cooperation among economies can also be beneficial. In addition, increased coherence between the WTO and other international organizations can help to magnify their collective impact on growth and inclusiveness.

Chapter B delves into the challenges faced by certain economies in integrating into the global market and diversifying, and argues that sustained economic growth would be most effectively achieved through open trade supported by complementary policies that facilitate the economy's structural transformation.

Income convergence has progressed over the last 30 years, but it has slowed since the global financial crisis of 2007-08, and took a backward step during the COVID-19 pandemic. Between 1995 and 2023, per capita income in low- and middle-income economies, adjusted for inflation, almost tripled, from US\$ 1,835 to US\$ 5,337; in comparison, global per capita income increased by approximately 65 per cent, from US\$ 7,050 to US\$ 11,570. This unprecedented income convergence was associated with a steep increase in the participation of low- and middle-income economies in international trade (see Figure 1). Between 1995 and 2022, the share of low- and middle-income economies in global trade grew from 21 per cent to 38 per cent, while the share of trade between developing economies in world trade almost quadrupled, increasing from 5 per cent in 1995 to 19 per cent in 2021. However, this convergence process has slowed since the global financial crisis, as the average share of trade in GDP of low- and middle-income economies has remained relatively constant. Economic convergence even went into reverse during the COVID-19 pandemic, which hit growth in poorer economies hardest.

Trade reforms have accelerated the structural transformation of low- and middle-income economies, contributing to income convergence. Access to foreign markets for both exports and imports has boosted sectoral productivity through greater economies of scale, competition, technology diffusion and innovation. Foreign direct investment (FDI) within global value chains (GVCs) has further contributed

Figure 1: Positive correlation between low- and middle-income economies' convergence speed and trade participation, 1996-2021



Source: Authors' calculations, based on World Bank data on nominal GDP and real GDP per capita and WTO data on trade in goods and commercial services.

Note: The figure displays the evolution over time of the population-weighted averages of trade participation and income convergence speed between 1996 and 2021. The trade participation index is the share of goods and commercial services trade in GDP, adjusted for country size. Speed of income convergence is expressed as the difference between the average real GDP per capita growth rate of low- and middle-income economies and the average growth rate in high-income economies. The light blue fill indicates a contribution of negative growth in high-income economies. The income groups are based on the 1995 World Bank classification.

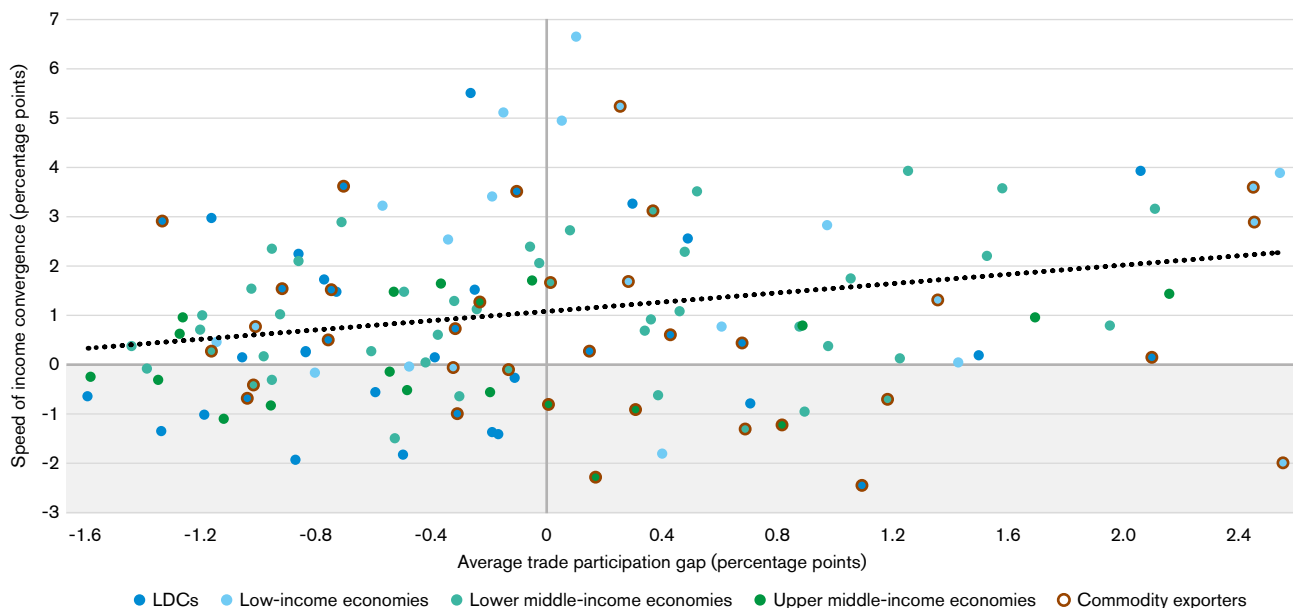
to the diffusion of new technologies, innovation and production upgrading, in particular in middle-income economies. Empirical evidence finds that unilateral trade reforms in developing economies have, on average, boosted economic growth by 1 to 1.5 percentage points, potentially resulting in a 10 to 20 per cent higher incomes over a decade. WTO simulation analysis further suggests that trade cost reductions between 1995 and 2020 led to a 6.8 per cent increase in global real GDP over the period, with low-income economies growing by around 33 per cent.

Income convergence and global economic integration have been uneven, leaving some economies behind. Between 1996 and 2021, one third of initially low- and middle-income economies grew slower than the average high-income economy in income-per-capita terms, meaning that the income gap between them was expanding instead of narrowing (see Figure 2). These diverging economies, many of them least-developed countries (LDCs), represent 13 per cent of the global population and are mainly in Africa, Latin America and the Middle East. Low- and middle-income economies that have lagged behind (i.e., diverged or converged at a very slow rate) generally tend to engage less in international trade, receive less FDI, rely more on commodities, export less complex products, and their trade tends to be concentrated on fewer partners.

High trade costs and limited diversification hamper convergence. Some economies have not fully benefited from globalization because high tariffs at home and abroad, low regional integration, administrative red tape, poor physical and digital infrastructure, geographical remoteness and weak institutions have limited their integration into international markets, and with it, diminished their access to foreign technology and to affordable high-quality inputs. Exporters in poor economies often lack the capacity to comply with foreign market standards and technical regulations, and may struggle to utilize preferential access to large markets. Meanwhile, some other economies, despite more active participation in global trade, have failed to leverage trade for development due to a lack of diversification in their production and export baskets. For example, economies that are specialized in capital-intensive extractive and primary sectors can be vulnerable to commodity price volatility, and can fail to achieve sustained growth because of macroeconomic instability.

Impediments to structural transformation and a limited ability to adopt foreign technologies can also prevent certain economies from reaping the gains from trade. Trade fosters growth by enabling the import of technology and know-how, and by leveraging external demand to shift workers and resources from subsistence work to more productive

Figure 2: Many low- and middle-income economies are lagging behind, 1996-2021



Source: Authors' calculations, based on World Bank data on nominal GDP and real GDP per capita and WTO data on trade in goods and commercial services.

Note: The figure displays the correlation between trade participation and convergence speed of economies that were low- or middle-income in 1995. The trade participation gap is the share of goods and commercial services trade in GDP, adjusted for country size, expressed as a percentage difference from the income group average. Income convergence speed is the annualized real income per capita growth between 1996 and 2021 expressed as the difference from the average growth in high-income economies. Economies below the horizontal axis did not converge in their per capita incomes towards high-income economies. Economies on the left of the vertical axis had an average trade participation below their income group average. The income groups are based on the 1995 World Bank classification. The LDC group is based on the United Nations (UN) classification.

activities in tradable sectors. However, these adjustment processes require functioning domestic capital, labour and land markets, macroeconomic stability and effective governance. An economy's ability to integrate new technologies also depends on having policies that improve the business environment and attract FDI, and that aim to develop a skilled workforce and competitive local supply chains, as well as on having a well-functioning infrastructure for energy, telecommunications and transport.

Geopolitical tensions, the technological revolution and climate change pose significant risks to economic convergence, both in terms of unwinding past achievements and endangering future prospects. Continued fragmentation of the global economy under geopolitical pressures would disproportionately impact low-income economies, which are furthest from the technological frontier and rely on access to foreign markets for sustained catch-up growth due to their limited market size and innovation capabilities. Climate change is already harming economic growth prospects in the most vulnerable economies, including LDCs, small-island developing states, and landlocked developing economies, which have the fewest resources to recover from natural

disasters and whose populations are especially exposed to changing rainfall patterns. Meanwhile, automation and digitalization in manufacturing is eroding opportunities for the traditional manufacturing-led economic growth and employment model.

Reducing trade costs is crucial to leverage future opportunities for trade-led growth. Diversifying GVCs, increasing trade in services, and developing trade in renewable energies and in critical minerals for climate technologies can create new opportunities for low- and middle-income economies. It is essential to address trade costs in services, bridge the digital divide, and tackle regulatory capacity and compliance issues if low- and middle-income economies are to take full advantage of these opportunities. Improving access for low-income economies to markets in both high-income and emerging economies, including by addressing tariff escalation on processed goods and trade-distorting subsidies, can also support economic growth in a world where an increasing share of trade is among developing economies. However, trade barriers arising from inadequate domestic infrastructure or institutional challenges also need to be addressed.

Trade policy needs to be complemented by policies that support structural transformation and technology absorption. For example, such policies may aim to create a business environment conducive to domestic and foreign investments, or to address specific business challenges and implement new policies, as in the case of special economic zones (SEZs). Technology absorption, including the domestic process of acquiring, developing and utilizing technological capabilities, can be enhanced through research and education policies. Other complementary policies may bridge information gaps between private and public sectors, or between local and foreign-owned firms, as well as raise awareness of new trade and investment opportunities.

Inclusiveness across economies can support inclusiveness within economies, and vice versa. Ensuring that the benefits of economic growth, including trade openness, are more widely distributed helps to establish a stable and relatively prosperous middle class, which in turn can help to support the overall development process in an economy by driving domestic consumption and encouraging entrepreneurial activity, economic diversification and social stability. In turn, this development process helps to achieve long-term economic growth and sustained poverty reduction.

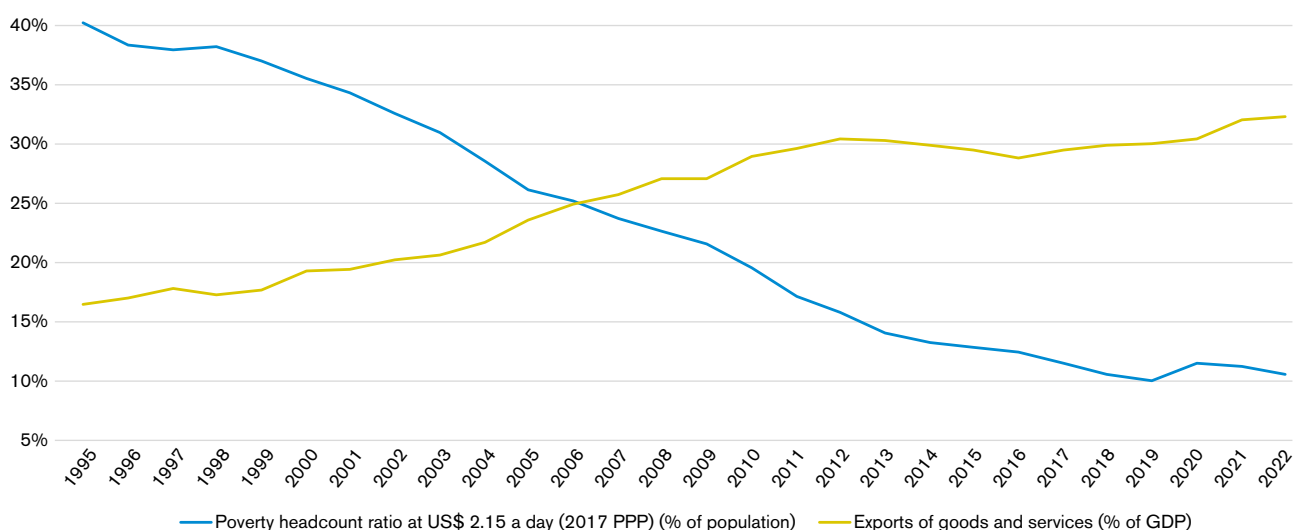
Chapter C analyses the factors that hinder individuals from accessing the gains from trade, and underscores the need to accompany trade

openness with other domestic policies that allow the gains from trade to flow to individuals, and enable them to move to where those gains are.

Trade has played a significant role in reducing poverty, especially in low- and middle-income economies. Trade has raised incomes and led to higher growth, resulting in significant benefits for some of the most vulnerable groups within economies. For instance, over the last 30 years, poverty has declined sharply as trade has grown (see Figure 3). The poverty headcount ratio in low- and middle-income economies fell from 40.3 per cent in 1995 to 10.6 per cent in 2022, while their share of trade in GDP doubled from about 16 per cent to 32 per cent. However, the COVID-19 pandemic halted progress in poverty reduction in many low- and middle-income economies as a result of widespread job losses, reduced incomes and constrained financial resources to acquire vaccines and establish social support systems to cope with the pandemic.

Over the past 30 years, global income inequality has remained high, but it has evolved differently across economies. The average Gini index, a measure of inequality, across a large set of economies fell from about 0.58 prior to the global financial crisis to 0.57 in 2022. However, this global average masks the diverse evolution of income inequality between economies, with some of them experiencing significant decreases, while others have faced persistent or widening disparities. Moreover, global income inequality remains high

Figure 3: Substantial poverty reduction alongside increased trade openness in low- and middle-income economies, 1995-2022



Source: Authors' calculations, based on World Bank data on poverty, exports and GDP.

Note: The figure displays the evolution of the average share of poverty headcount at US\$ 2.15 a day (2017 PPP) in population and the average share of exports of goods and services in GDP for low- and middle-income economies over the period 1995-2022. The income groups are based on the 2022 World Bank's classification.

in absolute levels, with the level observed in 2020 comparable to that of the early 1900s. The average share of income received by the top 1 per cent across all economies stands at 15.8 per cent.

Gains from trade are unevenly distributed among individuals within the economy, but this does not inherently increase inequality.

Trade openness increases the economy's overall welfare, but is sometimes blamed for also increasing inequality. While some economies became more unequal as they integrated into the global economy, in others, increased trade led to greater economic inclusion (see Figure 4). Trade openness can impact inequality differently through various channels. It can lead to wage cuts and job losses in sectors exposed to increase competition from abroad, while also creating new job opportunities, including higher-paying positions, in expanding sectors that leverage the economy's comparative advantages. Overall, trade supports a growing share of employment, with the average share of jobs dependent on exports reaching 28 per cent in 2019, marking a growth rate of over 20 per cent since 1995. These new, better paid jobs supported by trade can, in some cases, disproportionately benefit low-skilled workers. Similarly, the lower prices and consumer choice that come with trade openness can effectively increase the purchasing power of low- and middle-income consumers.

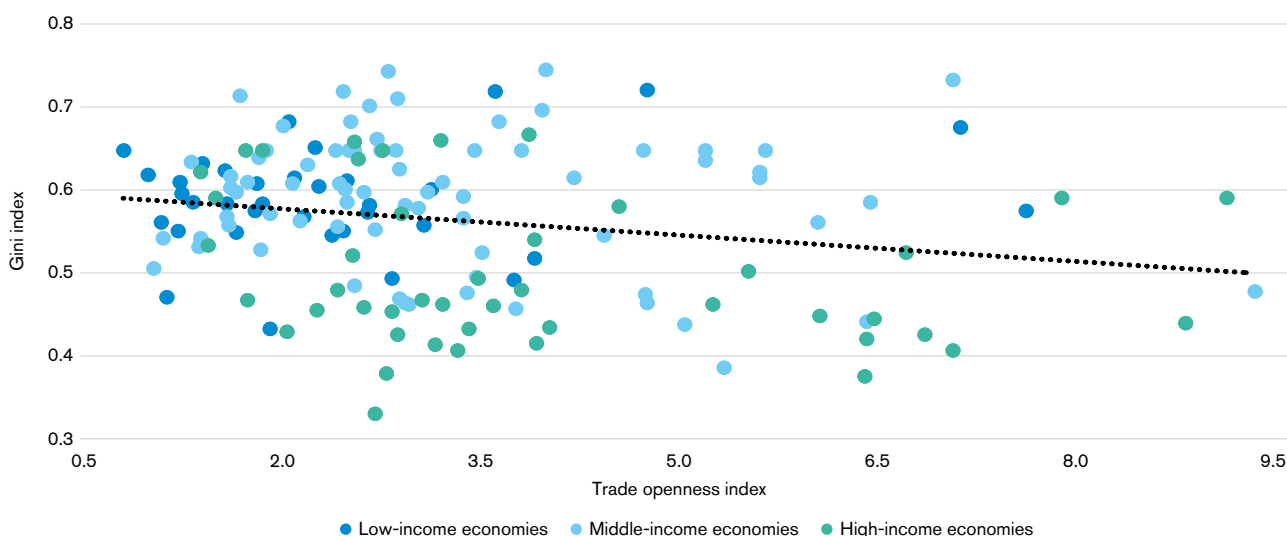
While trade generally brings benefits to many, some groups of individuals may experience long-term losses. The ability of workers to move from

lower- to higher-productivity jobs, and from declining sectors to growing ones, is the essential mechanism by which trade increases overall economic efficiency, promotes development and improves living standards. The impact of trade openness on workers depends on their industry, region, occupation and skillset. Individuals with lower incomes, workers with fewer skills, small business-owners and some women are often more susceptible to labour market disruptions resulting from trade openness. In the absence of adequate policy responses, the effects of labour market disruptions can last for long periods, and can spill over into the local economy when affected individuals must reduce their spending on local goods and services.

Mobility obstacles, reduce the gains from trade and exacerbate losses.

Transitioning to expanding sectors is easier said than done for people affected by import competition, who face individual-specific and institutional obstacles. Affected individuals may lack the skills or the financial means to adapt to import competition by seizing new job or business opportunities in growing sectors. For these reasons some women, people from low-income households and workers in the informal sector may find it difficult to transition to expanding formal industries. Poor transportation and digital networks can also hinder their ability to access new job markets, whether in person or online, especially for people living in remote areas. In addition, consumers in rural regions may not

Figure 4: Weak correlation between trade openness and income inequality, 2021



Source: Authors' calculations, based on World Inequality Database and World Bank data on trade openness.

Note: The figure shows the correlation between the Gini index and trade openness index. The Gini index is a measure of inequality, ranging from 0 for perfect equality to 1 for maximal inequality. The trade openness index corresponds to the share of exports and imports over GDP conditional on economy size. The analysis covers 157 economies, classified based on the 2021 World Bank income group classification.

benefit as much from the lower prices associated with trade openness because of high domestic trade costs and intermediaries' market power.

Trade policies that seek to mitigate the disruptive effects of trade by protecting specific groups of individuals can be costly and can negatively impact other segments of the population. Trade protection for specific groups in a given industry can raise the production costs for other sectors that rely on protected but more expensive goods or inputs whether produced domestically or imported. These costs can increase so much that they more than offset the positive employment impacts on directly protected import-competing industries. Such trade policies can also prove ineffective if affected trading partners retaliate and thereby threaten jobs supported by trade. In addition, measures such as export restrictions on food tend to be ineffective in shielding low-income consumers from external shocks because they can discourage farmers from producing more food, ultimately leading to shortages and higher costs for everyone, including the poor.

Making trade more inclusive is essential in a context of rising geopolitical tensions, technological revolution and climate change. Inclusiveness seeks to ensure that the benefits and opportunities of trade are accessible to all individuals and businesses. Trade brings benefits to many but the disparity between individuals who can effectively adjust to trade and those who cannot creates a risk of widening inequality. This can fuel political tensions and potentially erode support for trade openness. But trade fragmentation resulting from geopolitical tensions ultimately limits economic opportunities and financial resources, exacerbating poverty and inequality. While digitalization can promote inclusiveness by overcoming geographical remoteness, providing more time flexibility and enhancing the tradability of cross-border services, it could also disrupt labour markets in ways reminiscent of import competition in the past. Marginalized individuals are particularly vulnerable to climate change due to their limited adaptive capacities. Meanwhile, measures such as reforming agricultural trade rules could help foster access to diverse and resilient food sources, even as weather patterns change.

Removing discriminatory trade barriers affecting vulnerable groups could foster a more inclusive trading system. Certain restrictive trade policies can have a disproportionate impact on certain vulnerable groups, including low-income households, some women, and micro, small and medium-sized

enterprises (MSMES). For instance, tariffs tend to be higher in sectors with a higher proportion of female employees, and on products primarily consumed by women. Removing the gender bias of tariffs can contribute to making trade more inclusive. Similarly, adopting trade facilitation measures and improving the availability of trade finance can contribute to reducing the fixed costs of participating in international trade, which is particularly beneficial for MSMEs given their limited financial resources. Trade policy can further support inclusiveness more effectively by helping to address distortions and barriers that hinder equal participation in trade.

Complementary domestic policies are required to make trade more inclusive. The decision of whether and how to address inclusiveness rests with each government. While there is no "one size fits all" approach, economic growth, institutional reforms and sustainable debt management are important enablers of inclusiveness. Support for affected individuals in managing trade adjustment costs and maximizing the benefit of trade openness can be achieved through the adoption of a mix of labour market adjustment, competitiveness and compensation policies. Labour market policies, such as vocational training and unemployment benefits, can help affected workers during periods of job transition. In the medium term, education policies can help to develop a more skilled and mobile workforce. Competition policy to address excessive market power of certain large firms can help to ensure that consumers benefit from lower prices due to trade openness. Other policies that increase competitiveness can also make the economy more responsive, such as affordable, efficient and reliable infrastructure and well-functioning financial markets. Taxation can help to fund support programmes for those adversely affected by trade. Increasing the participation of vulnerable groups in the decision-making process can further contribute to ensuring that their specific needs and situations are taken into consideration.

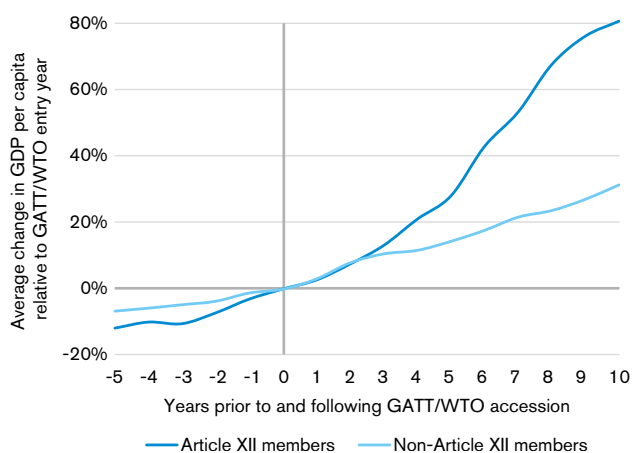
Chapter D discusses how international cooperation can make trade and complementary policies more effective at supporting inclusiveness across and within economies, and highlights how better coordination among international organizations could amplify their collective impact on inclusiveness.

The WTO contributes to inclusiveness across economies by promoting an open, rules-based and predictable multilateral trading system. The predictable access to open global markets

underpinned by the multilateral trading system has enabled some developing economies to catch up with more advanced economies. Membership of the General Agreement on Tariffs and Trade (GATT)/WTO, has, on average, boosted trade between members by 140 per cent. WTO commitments have also been found to reduce protectionist responses to economic shocks, thereby reducing trade policy uncertainty, which is crucial for attracting investments.

WTO rules also contribute to improving governance through economic reform, thereby promoting sustained economic growth. Accession to the WTO contributes to economic growth by facilitating trade growth, fostering trade revenue stability and FDI through a predictable trade policy environment. Acceding WTO members commit to wide-ranging reforms of their trade policies, economic institutions and domestic governance, including by reducing tariffs and non-tariff barriers, regulating state-owned enterprises, protecting intellectual property rights, and establishing independent tribunals. Economies that underwent a reform process during their WTO accession experienced an average growth rate that was 1.5 percentage points higher than economies that underwent no such process; these economies continued to grow faster after their accession to the WTO (see Figure 5).

Figure 5: Higher economic growth in WTO members with more extensive commitments



Source: Authors' calculations, based on Penn World Table and Brotto et al. (2024).

Note: The figure shows the average change in GDP per capita in relation to the year of GATT/WTO entry for both Article XII WTO members and non-Article XII members. GDP per capita growth is based on expenditure-side real GDP expressed in 2017 US\$ purchasing power parity. Article XII members refers to members that acceded the WTO after 1995 under Article XII of the GATT. Non-Article XII refers to GATT contracting members that became WTO members without having to go through the Article XII process.

WTO rules provide for various flexibilities aiming to enhance trade opportunities for developing economies, including LDCs. Through successive negotiations, amendments and decisions, the WTO agreements now include over 155 special and differential treatment (S&DT) provisions targeted at developing economies, including 25 S&DT provisions that are specific to LDCs. These provisions are designed to safeguard the trade interests, offering flexibility in commitments, providing longer periods for implementing WTO agreements and ensuring technical assistance. For instance, tariff preferences have expanded exports from developing economies and LDCs, despite the administrative costs associated with these preferences. Preference schemes have also been found to raise exports to third-party economies through learning-by-exporting effects.

Aid for Trade projects and similar technical assistance programmes available for developing economies have enhanced their export opportunities. Between 2006 and 2022, a cumulative total of US\$ 648 billion of Aid for Trade funding was allocated to promote the integration of developing economies and LDCs into the multilateral trading system, as well as to support economic convergence by addressing supply-side capacity and trade-related infrastructure constraints and building trade-related skills. Aid for Trade projects have been found to enhance an economy's trade potential, by expanding established trade relations and by establishing new trade relations. In 2023, the WTO and the World Bank launched the "Digital Trade for Africa" project to leverage their synergies to provide technical assistance and capacity-building to ensure African economies' digital infrastructure is supported by enabling regulatory frameworks. More recently, the World Bank and the WTO launched a joint programme to assist developing economies in services trade.

Greater efforts to include the economies that have been left behind in the global trading system require a more effective and inclusive WTO. Amid geopolitical tensions it is important to uphold the operational capacities of the WTO. Addressing remaining trade barriers and facilitating the implementation of existing WTO agreements, assisting low-income economies in complying with export market requirements, accelerating the accession to the WTO of new members can contribute to create new opportunities for further convergence. Despite progress, many developing members, including LDCs and small, vulnerable economies, face constraints in participating in the different WTO functions. Strengthening the participation of all WTO members

in negotiations, deliberations and committee work is essential to ensure a fairer representation, enhance mutual understanding, and promote more effective and inclusive decision-making. Timely trade monitoring, along with an effectively functioning dispute settlement mechanism accessible to all members, is also crucial for achieving a more inclusive WTO.

Greater international trade cooperation is also necessary to address evolving challenges in areas crucial to the future of trade, such as services, digital and green trade. Efforts to address trade costs in services, which are higher than those for trade in goods, can reduce business uncertainty and create opportunities in the cross-border supply of services and digital trade. Greater coordination and experience-sharing on digital trade regulations can support the adoption of best practices and strengthen domestic and global digital regulatory frameworks. In this regard, under the Joint Initiative on E-commerce, a group of WTO members recently stabilized the text of an agreement governing some aspects of digital trade. Even though low-income economies receive only a small share of FDI, they nevertheless stand to benefit significantly from improvements in investment facilitation, as set out in the plurilateral Investment Facilitation for Development (IFD) Agreement, which was recently finalized by 125 WTO members. Coordinating trade-related climate change policies can also prevent trade tensions resulting from carbon border policies and climate support measures that some developing economies perceive as a hindrance, however inadvertent, to their export capabilities – and hence an impediment to their economic convergence.

Finding the right balance between binding commitments and effective flexibilities is essential to further inclusiveness across economies. Various proposals have been put forward by some WTO members to modify S&DT provisions. There is, however, no consensus among WTO members. While there is no “one-size-fits-all” approach to flexibilities, commitments should be aligned with a member’s capacity to implement them, while recognizing that certain carve-outs can undermine some of the benefits of a rule-based system. The S&DT provisions of the Trade Facilitation Agreement (TFA) and of the recent plurilateral IFD Agreement mark a significant shift from the WTO’s traditional S&DT approach by introducing a conditional link between commitment requirements and implementation capacity, allowing developing and least-developed country members to set their own implementation timetables based on their capacity. These types of S&DT provisions could serve as

a blueprint, by providing relevant policy space for developing economies without undermining the predictability and stability of trade policies achieved through credible commitments.

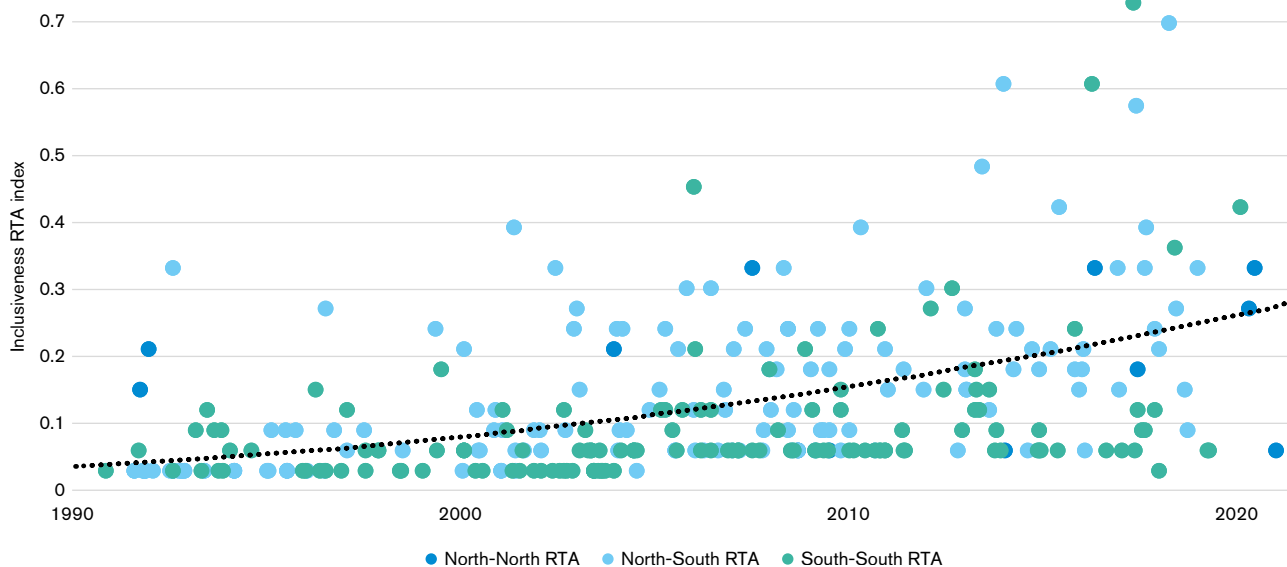
Concerns about the distributional impacts of trade have led to a growing number of trade agreements including provisions explicitly related to inclusiveness within economies.

Provisions on labour standards, such as those set by the International Labour Organization (ILO), covering issues like child labour and discrimination in the labour market, are included in an increasing number of regional trade agreements (RTAs). Some relatively recent detailed provisions on inclusiveness in RTAs specifically relate to disadvantaged groups, such as women, vulnerable workers, indigenous people and persons with disabilities (see Figure 6). Other RTA provisions promote corporate social responsibility or relate to specific types of firms, including MSMEs and artisanal companies. While many provisions on inclusiveness promote cooperation activities, some other provisions establish specific level playing field disciplines or exemptions.

WTO rules also contribute to inclusiveness within economies. Although WTO agreements are mainly concerned with inclusiveness across economies, the preamble of the Marrakesh Agreement Establishing the World Trade Organization recognizes that WTO members should conduct trade relations with a view to raising standards of living and real income. WTO disciplines aim mainly to minimize the negative effects of trade policies on trading partners to increase the economic benefits from more trade openness. This, in turn, contributes to inclusiveness within economies by fostering economic growth and reducing poverty. For instance, a number of provisions in the WTO Agreement on Agriculture aim to contribute to food security, which is of particular importance to low-income households. More recently, the Declaration on Services Domestic Regulation, adopted by a group of WTO members in 2021, prohibits gender discrimination when authorizing the supply of a service.

Nothing in the WTO agreements restricts the use of non-discriminatory complementary policies for inclusiveness. The decision of whether and how to address inclusiveness rests with each government. Many distortions that lead to unequal effects from trade-opening are often rooted in structural domestic factors, that are best addressed through domestic complementary policies, such as labour, education or taxation policies. Trade-related instruments that some governments may choose to use for inclusiveness

Figure 6: Increasing numbers of provisions on inclusiveness in RTAs, 1990-2021



Source: Authors' calculations, based on a mapping of provisions on inclusiveness in RTAs.

Note: This figure shows the evolution of provisions on inclusiveness in RTAs between 1990 and 2021. The inclusiveness RTA index ranges from 0 to 1 and considers 33 explicit types of provisions addressing different dimensions of inclusiveness, including human rights, workers, MSMEs, poverty, gender, indigenous communities, people with disabilities, and other minorities and vulnerable groups. "North" is defined as high-income economies, whereas "South" is defined as low- and middle-income countries, according to the 2022 World Bank's income group classification.

purposes, such as tariffs, subsidies and export restrictions, are subject to WTO disciplines to avoid potential negative spillovers on other economies and potential retaliatory measures that would undermine overall inclusiveness. For instance, the WTO also provides for safeguards that can be applied to protect some workers in specific domestic industries in response to import surges, as well as trade remedy measures to offset the harmful effects of market distortions.

WTO members are increasingly discussing how to make trade more inclusive by fostering the greater participation of women and MSMEs in trade. The recognition of the specific constraints of MSMEs and businesses owned by women in integrating global trade and leveraging trade for economic empowerment has resulted in the establishment of the WTO Informal Working Groups on MSMEs and on Trade and Gender. The Informal Working Group on MSMEs provides a forum to exchange information and experiences on ways in which WTO members could better support the participation of MSMEs in global trade. The Informal Working Group on Trade and Gender aims to enhance women's participation in international trade by sharing best practices and exploring how women can benefit from the Aid for Trade initiative, among others. Discussions on inclusive trade have also gained significant importance in other WTO committees and working groups.

A number of trade-related technical and capacity-building initiatives in the WTO are contributing to making trade more inclusive.

Poverty reduction, women's economic empowerment and MSME participation are increasingly being integrated into Aid for Trade, as well as into projects of the Enhanced Integrated Framework (EIF) and Standards and Trade Development Facility (STDF), multilateral partnerships supported by the WTO. Trade finance facilitation programmes can also significantly benefit and enhance international trade for MSMEs and women traders. In early 2024, the WTO and the International Trade Centre (ITC) launched a "Women Exporters in the Digital Economy" (WEIDE) Fund to assist women in accessing opportunities in international trade and the digital economy.

The WTO could help to address inclusiveness issues within an economy by means of its transparency and monitoring functions. More information on the effects of certain trade policy measures on vulnerable groups could help address potential discriminatory effects. Collecting relevant disaggregated data and conducting analysis could inform these discussions. For instance, the trade and gender dimension has arisen in discussions of the Trade Policy Review Body (TPRB), mainly through the voluntary provision of relevant information in trade policy review reports prepared by members and their

statements at TPRB meetings. Identifying strategies and mechanisms to mitigate and minimize the adverse effects of export restrictions of essential products on importing economies could also contribute to food security and resilience.

The implementation of WTO commitments can also become more inclusive if vulnerable groups are actively involved. The increased participation of representatives from vulnerable groups in domestic deliberative trade processes can help to ensure that their perspectives and interests are taken into account when certain WTO provisions are implemented. The TFA serves as a noteworthy example of how trade policy can become more inclusive, by involving representatives from groups that may face discrimination in policy implementation in national trade facilitation committees, and providing them with access to relevant trade information, as well as to capacity-building and training opportunities. Sustained government support and resources are, however, essential if national trade facilitation committees are to achieve more effective and inclusive trade reforms.

The multifaceted “trade and” challenges faced today demand a robust and coordinated “WTO

and” approach to further support inclusiveness across and within economies. While the WTO remains a cornerstone for international trade cooperation, many trade-related developmental and inclusive policies are also addressed by other international organizations. Under the “Decision on achieving greater coherence in global economic policy-making”, the WTO already collaborates with the International Monetary Fund (IMF) and the World Bank. The WTO also works with many other international organizations. Enhancing collaboration among international organizations could help to leverage synergies between trade policies and complementary policies, and international organizations could mutually reinforce each other in fostering inclusiveness across and within economies. It is important to support coordinated efforts to strengthen capacity to implement WTO agreements by addressing regulatory, skills and infrastructure gaps, as well as to address competition, corporate taxation and corruption issues. These collaborative efforts could take various forms, from partnerships to simple exchanges of information. The WTO could serve as a platform for international organizations, governments, businesses and non-governmental organizations to further collaborate and share information on specific trade-related issues.



Introduction

Global trade is often accused of creating a more unequal world, but in fact the opposite is happening. Billions of people in developing economies are catching up to the more advanced economies, as millions of people in the advanced economies continue to move ahead. This global economic convergence is only possible because the world has become more open and integrated – expanding access to new markets, new technologies and new models for achieving rapid, sustained and inclusive growth.

Yet there are still economies – and groups within economies – that have yet to share in expanding growth, or whose growth has stalled, because they have been unable to harness their trade potential and comparative advantages. This is the result partly of supply constraints, partly of poor connectivity, and partly of trade barriers and distortions, as well as of a lack of coherence across the key policies needed to drive trade-led growth. The slowing pace of global economic integration over the last decade and a half – and the danger that rising protectionism could push integration into reverse – could make it even harder for these economies to finally harness the trade behind rapid growth.

This report argues that much more can – and should – be done domestically and internationally to achieve more truly inclusive global trade.

Our world is only partly globalized

Creating a more inclusive global economy requires more and better trade, not less trade. The word “globalization” often conjures up images of a world economy being uniformly woven together by trade, transport and technology, but this picture is only partly accurate (Ohmae, 1999). While many economies and people are already deeply interconnected – and others are in the process of rapidly linking up – other economies, regions and groups have not been able to successfully integrate into the global economy, or are not benefitting from the integration they have achieved so far.

These varying levels of global integration largely mirror varying levels of wealth, living standards and technological progress around the world – with the richer and more advanced economies often being the most open and integrated, and fast-emerging economies also moving in this direction, but many low-income economies, and even some middle-income economies, only partially integrated into the global economy, and at risk of being left even further behind by the world’s ongoing economic and technological progress. As a result, today’s unevenly globalized world is also an unequal world.

A diverging global economy has become a converging one

Two hundred years ago, the world was a more equal place largely because most people were equally poor. The richest economy in the world in 1820, Great Britain, had a per capita income only about five times larger than the poorest economy at the time, Nepal (Milanovic, 2023). The Industrial Revolution, which started roughly a half century before, marked a turning point, sparking an unprecedented surge of economic growth and technological progress that upended the relatively static and level global economic landscape that had prevailed up until then.

This great economic leap forward was limited at first – starting with Great Britain, expanding to the rest of Europe, and then expanding again to Europe’s offshoots in North America and elsewhere around the globe. These “early industrializers” continued to race ahead of the rest of the world throughout the 19th and first half of the 20th centuries.

This rapid growth of the more advanced “West”, which represented just 15 per cent of the world’s population, and the slow or lack of growth in the rest of

the world, which represented 85 per cent of humanity, has been called the “Great Divergence” because it generated ever-widening disparities in development, living standards and economic power worldwide (Huntington, 1996; Pomeranz, 2000). By 1980, the United States, by then the world’s richest economy, had a per capita income over 100 times greater than the poorest economies in parts of Asia and Africa.

But over time, the impact of the Industrial Revolution continued to radiate outwards, like ripples on a pond, and each new wave of global economic development was more extensive – and involved millions more people – than its predecessor. The period after the Second World War saw Japan and the “Asian Tigers” (Hong Kong (China), the Republic of Korea, Singapore and Chinese Taipei) – the fast-globalizing economies of that era – rapidly catch up with developed economies in the West, even as advanced industrial economies redoubled their lead on the poorer and less developed economies that were being left ever further behind. For example, in 1953, the Republic of Korea had a per capita GDP, adjusted for inflation, of US\$ 67, making it one of the poorest countries in the world; by 2023, its per capita GDP had reached more than US\$ 34,000, roughly the same as that of the European Union.

The period after the 1980s saw an even larger share of the developing world begin its own process of rapid industrialization and economic modernization, helping to lift a billion of people out of poverty and to narrow the wealth and living standards gap with the West (World Bank and WTO, 2015). China, with its 1.3 billion people, has seen its economy grow at an average of 9 per cent per year for the past four decades.

While such large emerging economies capture much of the world’s attention, the “new globalizers” also encompass economies of all sizes and in all regions, such as Cambodia, Ethiopia, Peru, Poland, Qatar and Uganda.

This newest, fastest, and largest phase of economic catch-up has been termed the “Great Convergence” because, for the first time since the start of the Industrial Revolution, most of the world’s population is becoming relatively more, not less, equal as billions of people rapidly move up the growth, technology and development ladder (Spence, 2011; Mahhubani, 2013).

In the 1980s, France, Japan, the United Kingdom, the United States and other developed economies accounted for more than 60 per cent of the world’s GDP, while developing economies accounted for less

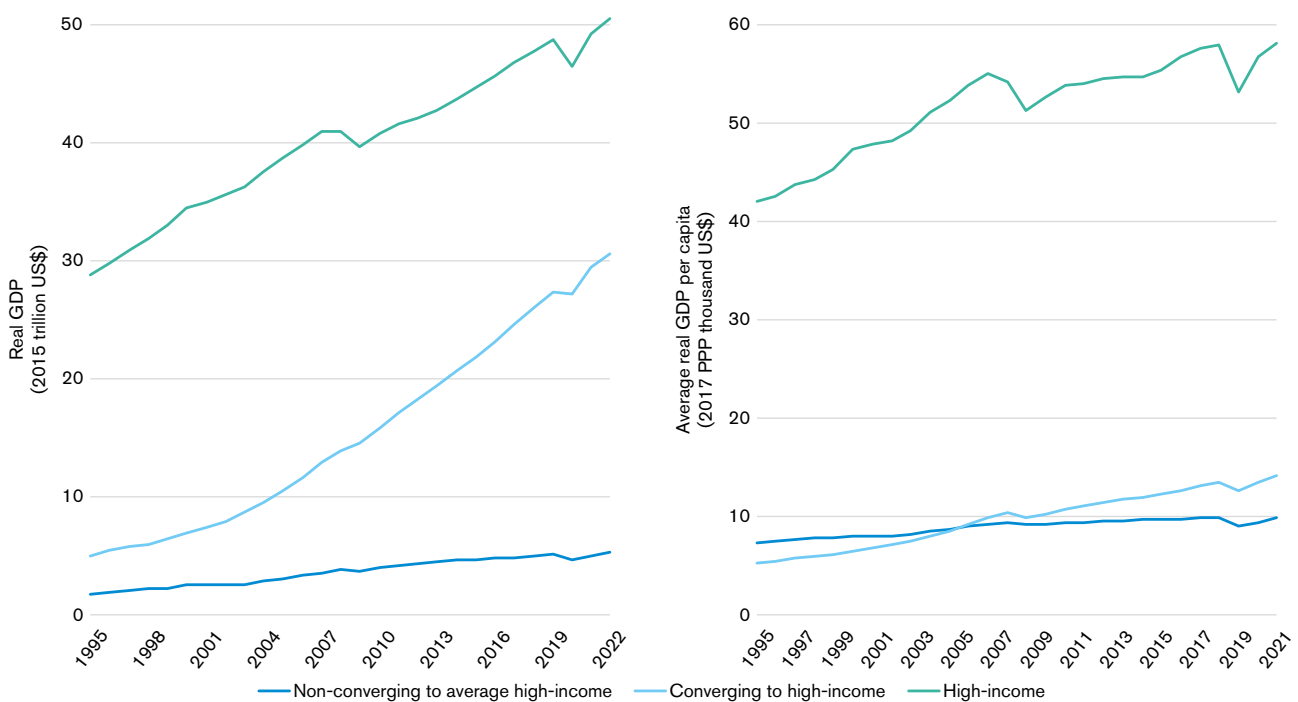
than 40 per cent. Today, those shares have reversed: Brazil, China, Indonesia and other developing economies account for almost 60 per cent of the world’s GDP, while developed economies account for just over 40 per cent.

While the per capita output of emerging economies is still well behind that of advanced economies, the gaps are narrowing at an accelerating rate. China is the most striking example. In 1990, China had just 7 per cent of the GDP of the United States measured at market exchange rates, but by 2022, China’s GDP, at US\$ 18.3 trillion, was 73 per cent of the GDP of the United States, a ten-fold increase. China’s per capita income is now roughly US\$ 13,000, approximately 17 per cent of US per capita income – compared with less than 2 per cent in 1990 – and at current growth rates it could reach half of US levels by 2050. Other fast-growing developing economies are following a similar trajectory.

In the same way that the economic rise of the United States triggered a global economic boom in the second half of the 19th century, and the ascent of Japan and the “Asian Tigers” helped to drive even greater growth after 1945, the rapid development of four billion-plus people in the global South and East – together with their growing demands for technology, capital, advanced machinery and services – will inevitably drive further growth and income gains in the developed West as well. According to Hufbauer and Hogan (2023), US gains from engaging in world markets since 1950 amounted to almost US\$ 2.6 trillion in 2022. Over the past decade and a half, China alone has accounted for 35 per cent of global nominal GDP growth, while the United States has accounted for 27 per cent (Prasad, 2023).

As a result, both high-income and fast-emerging economies have seen their living standards steadily advance (see Figure A.1). Over the last 40 years,

Figure A.1: Significant real GDP convergence but more limited average real GDP per capita convergence, 1995-2022



Source: Authors’ calculations, based on World Bank data on real GDP and real GDP per capita.

Note: The figure displays the evolution of real GDP (in 2015 US\$) and real GDP per capita in purchasing power parity (PPP) (in 2017 US\$). The non-converging group includes economies that were low- or middle-income in 1995 and that did not grow as fast as high-income economies between 1996 and 2021 (measured by real GDP per capita growth). Conversely, the converging group includes low- or middle-income economies that grew faster than high-income economies during the same period. The income groups are based on the 1995 World Bank classification.

US per capita income has increased six-fold, while Swedes are 30 times wealthier today than they were 200 years ago (Roser, 2024).

The global diffusion of technology also benefits everyone because, as Paul Romer famously observed, knowledge is expanded, not reduced, when it spreads (Romer, 1986).

Many of today's leading-edge technologies, such as artificial intelligence (AI), quantum computing, robotics and biotechnologies, are still generated in developed economies. But as some emerging economies become more advanced, they are fast becoming technology innovators and leaders too – in telecommunications, aerospace, clean energy and other advanced technologies – adding to the positive feedback loop that is accelerating global economic progress.

The result is a world economy that is growing, developing and converging at an unprecedented rate, although developing economies' average per capita output is still significantly lower than that of advanced economies (see Figure A.1). According to World Bank data, in 1995, global per capita output, adjusted for inflation, amounted to roughly US\$ 7,050. Even after setbacks such as the Asian financial crisis (1997-98), the global financial crisis (2007-09), the COVID-19 pandemic, and numerous regional conflicts and wars, global per capita output had increased by 65 per cent to over US\$ 11,570 by 2023. And if growth rates continue at current trends, global output could further double by mid-century (Goldman Sachs, 2023).

While economic growth is not the only condition for development, it is a necessary condition – which helps to explain why much of the world's population is also making enormous strides in reducing poverty, malnutrition and infant mortality, and in improving access to schooling, healthcare and electricity.

Between 1950 and 2019, global literacy increased by a third, from 56 per cent of the world's population to over 86 per cent, and women's literacy increased even more dramatically, from just 45 per cent to almost 83 per cent (UNESCO, 2024). According to World Bank data, global average life expectancy has increased by over a third, from 48 years to 73 years. And global per capita income, adjusted for inflation, has almost quadrupled, from US\$ 2,161 to US\$ 11,570.

Since 1995 alone, the poverty headcount ratio in low- and middle-income economies fell from 40.3 per cent in 1995 to 10.6 per cent in 2022. Never before have the living conditions and prospects of so many people changed so dramatically and rapidly in history (UNDP, 2013).

Fostering growth and trade are two sides of the same coin

This "Great Convergence" was only possible because the world economy has grown more open and integrated, driven mainly by declining transport and communications costs, but also by decreasing trade barriers and increasing economic cooperation, all underpinned by a rules-based international economic system.

In the same way that steamships, railways and telegraph cables began to link the world economy together in the 19th century, container ships, jet airplanes and the internet have woven an even more integrated global economy in the 20th and early 21st centuries.

The invention of the shipping container alone has been a major driver of globalization. By 2021, it cost less to move a container from Los Angeles to Shanghai – half-way around the world – than from Los Angeles to San Diego – just 200 km down the road (Shiphub, 2021), although there is a risk that recent geopolitical and environmental disruptions may change that. The cost of overseas telecommunications is approaching zero, fuelling an explosion of digital services trade, including online education, telemedicine and on-line distribution. China could not have become the new "workshop of the world" without the transoceanic "conveyor belt" that containerization has provided (Economist, 2013).

While transport and communications technologies have been important drivers of global economic integration, international economic cooperation and rule-making aimed at lowering trade barriers, creating a level economic playing field, and the avoidance of beggar-thy-neighbour currency wars has also played a central role. The gold standard and an expanding European network of bilateral trade agreements underpinned the first age of globalization in the 19th century, just as new multilateral economic institutions (the International Monetary Fund, the World Bank and the General Agreement on Tariffs and Trade (GATT), succeeded by the WTO) – and a series of multilateral and regional trade liberalization initiatives – underpinned the resumption of globalization after 1945.

Average trade-weighted applied tariffs fell by almost 40 per cent after the Second World War and have fallen by over two-thirds in the last three decades, from 6.9 per cent in 1996 to 2 per cent in 2022. Today some 60 per cent of world trade now flows tariff-free, while another fifth is subject to tariffs of less than 5 per cent.

The combination of declining physical and policy-induced trade costs has helped to fuel an exponential growth in world trade. Between 1950 and 2022, annual merchandise trade grew at a rate of 5.4 per cent a year, translating into an extraordinary 45-fold expansion.

More recently, new sectors of world trade have been expanding even faster. Services trade has grown 6.8 per cent annually since 1990, digitally delivered services have grown at 8.2 per cent a year since 2005, and renewable energy goods trade (including solar panels and wind turbines) has grown fastest of all, by 10.3 per cent a year, more than double other goods trade (4.9 per cent), since 2005 (see Figure A.2).

With this expansion of trade has come a widening and deepening of global integration. Although slowing trade growth since 2008 seems to signal a slowdown in economic opening and integration worldwide, the global trade-to-GDP ratio rose from around 5 per cent in 1950, to 20 per cent in 1995, to over 29 per cent in 2023, underscoring the central role of trade in weaving together today’s increasingly interconnected and interdependent world economy.

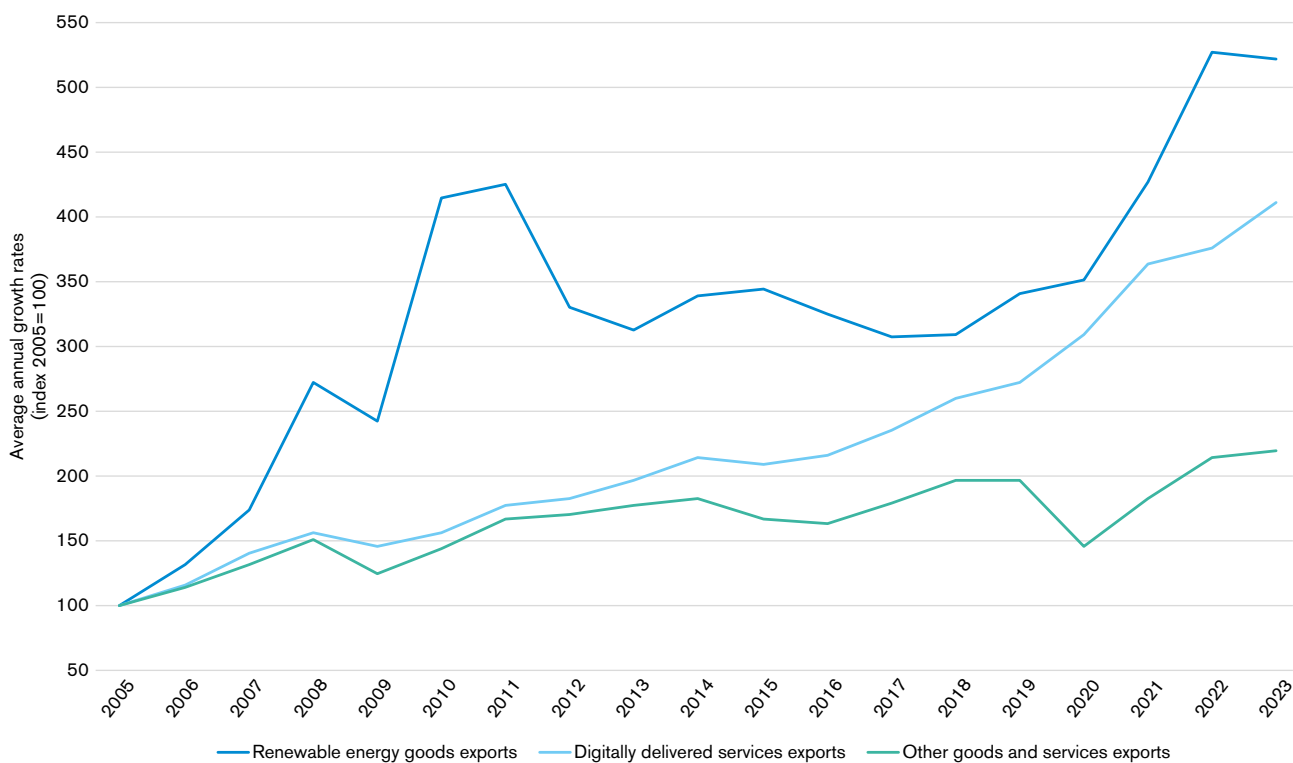
The world’s fastest-growing economies are also some of the most open and integrated

Almost all of the fast-developing economies over the past 40 years – indeed, over the past two centuries – have used integration into the global trading system to drive sustained growth. While these economies may not have opened up in the same way, transformed at the same speed, or adopted the same policies, the common thread running through all their experiences is the shift towards more outward-oriented, trade-led economic growth strategies. In other words, openness and growth have gone hand-in-hand (see Figure A.3).

A more open and integrated world economy has enabled some developing economies to catch up with – and converge on – more advanced economies in several critical ways.

One is by leveraging global demand. Many low- and middle-income economies are unable to generate high growth by relying on domestic demand alone. Increased access to global markets for their exports

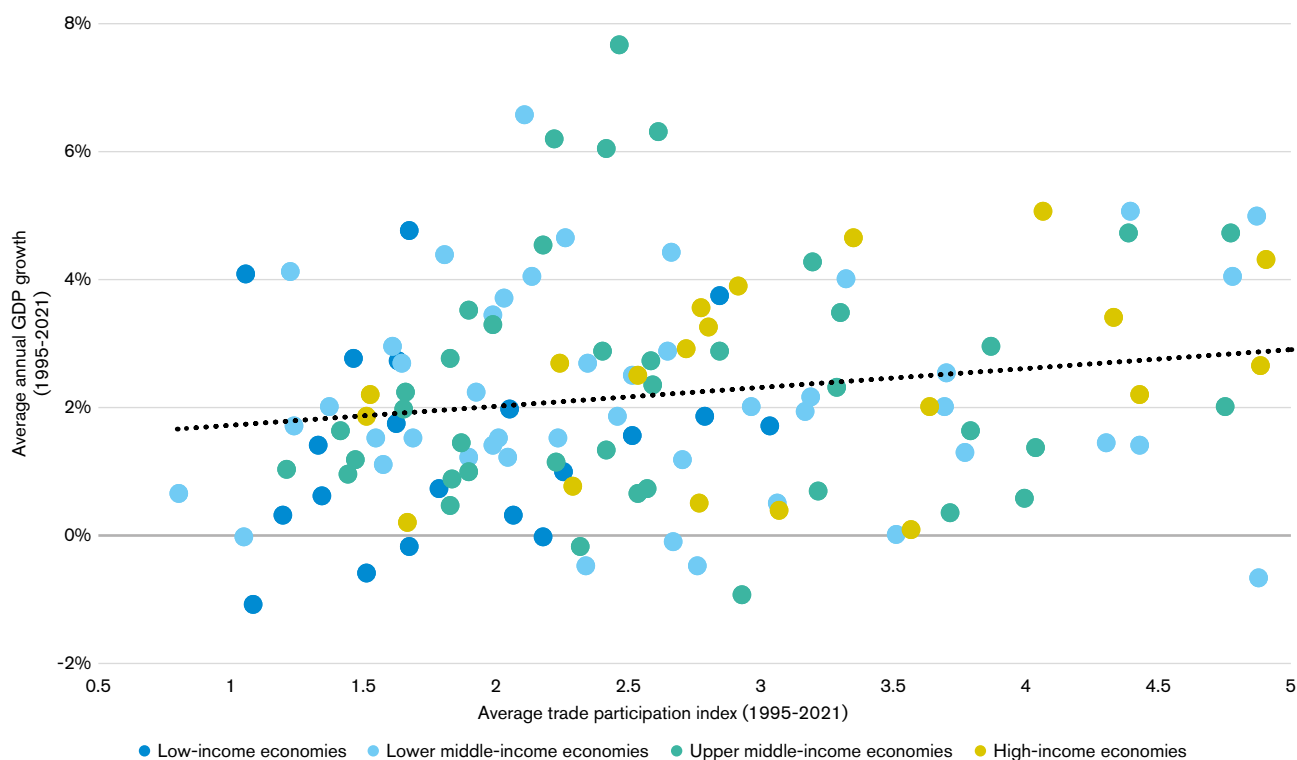
Figure A.2: Export growth of environmental and digital trade significantly higher than other goods and services, 2005-23



Source: Authors’ calculations, based on UNCTAD and WTO data and Trade Data Monitor (TDM) data for 2023.

Note: The figure displays the evolution of the average annual export growth rate of environmental goods (specifically, light-emitting diodes (LEDs), solar and other non-electric water heaters, and wind turbines), digitally delivered services (specifically, services traded across borders through computer networks), and other goods and services exports. Estimates for 2023 are preliminary.

Figure A.3: Positive correlation between trade participation and per capita GDP growth, 1995-2021



Source: Authors' calculations, based on World Bank data on GDP and trade.

Note: The trade participation index is the share of goods and commercial services trade in GDP, adjusted for the country size. The income groups are based on the 2022 World Bank classification.

has allowed them to leverage comparative advantages, exploit economies of scale, and overcome the constraints imposed by small and relatively poor domestic markets or remote geographical locations – all of which has helped to increase efficiency, boost productivity and fuel rapid economic growth, particularly in sectors with high export potential.

Another related factor driving their rapid growth has been access to foreign direct investment (FDI). As global markets have opened up and trade costs have fallen, multinational enterprises have “unbundled” the production process and shifted its various stages to relatively more cost-efficient locations around the planet. This rise of global value chains (GVCs) – effectively world factories – has created a positive feedback loop: more open trade has encouraged more FDI, as export capacity is strengthened and upgraded; and more FDI has encouraged more trade, as GVCs expand and grow more competitive. Upwards of two-thirds of world trade now takes place within globe-spanning multinational enterprises or with their suppliers.

GVCs have enabled the integration of many developing economies into the global economy in other important ways: by allowing them to link up with established

trade networks and to specialize in a specific product without having to first develop a comprehensive industrial base. In the early 19th century, Great Britain required a complex combination of domestic production factors, including steam power technology, cheap coal, advanced metallurgy, efficient agriculture, a relatively sophisticated financial system and an increasingly urbanized workforce, to kick-start its industrialization (Van Neuss, 2015). Singapore's rapid industrialization after 1965 depended largely on one key domestic asset: a highly skilled, innovative and entrepreneurial workforce, with other main factors of production, such as food, energy, machinery and natural resources, being imported (Economist, 2015).

This expanding global web of trade, investment and production has also helped developing economies to dramatically increase access to the most critical growth input of all, technology – either in the form of imported products, such as machinery, software or solar panels, or as imported services, such as product designs, production techniques, supplier training or overseas education. Sometimes the simple cross-border flow of ideas has been enough to inspire local innovation and invention (Buera and Oberfield, 2020; Cai, Li and Santacreu, 2022; Sampson, 2023).

Either way, the globalization of technology has made it easier, cheaper and quicker for many developing economies to industrialize, helping them to accelerate learning curves and, in some cases, leapfrog stages of development (Baldwin, 2019).

Trade is necessary for fast growth, but is not sufficient

Economies that have successfully harnessed trade to drive faster growth have also implemented a range of domestic policies that have helped them to leverage their comparative advantages, facilitate connectivity to global markets, promote economic adjustment and cushion the adverse impacts of structural change.

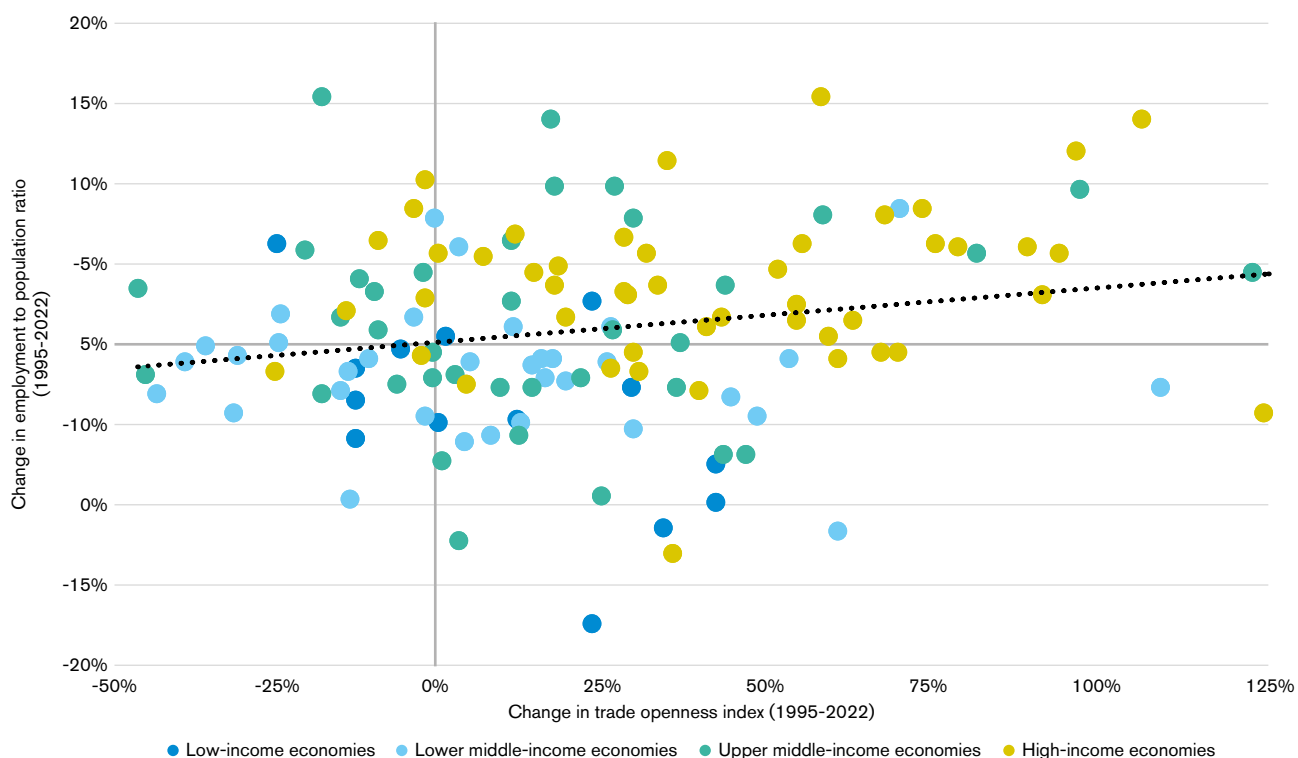
At a minimum, they have provided the basic “operating system” that markets need to function efficiently – political and macroeconomic stability, effective financial and legal systems, and a transparent, efficient and non-discriminatory regulatory environment. They have also implemented complementary policies aimed at promoting FDI, encouraging competitive markets, protecting intellectual property and advancing

sustainable development, recognizing that trade now increasingly takes place within complex global production networks and that integrating into the networks requires joined-up policies and strategies.

And fast-globalizing economies have usually invested heavily in infrastructure, adjustment assistance, the active upskilling and re-skilling of workers, and other “public goods” to create an enabling environment for trade-led growth and to help shift industries into more value-added production and exports.

Trade policies and policies related to macroeconomics, development, and inclusiveness are interlinked and can reinforce each other. By ensuring these policies are not only well-designed but coherent, trade can be better leveraged for sustained growth. More inclusive trade can, in turn, enhance the effectiveness of many other complementary policies, potentially creating a positive cycle of improvement. Trade encourages structural reform, increases productivity and spurs innovation, helping to expand economic opportunities. Old industries may decline but newer, more dynamic industries emerge; old jobs may disappear, but other better, higher-paying jobs are created. While the overall

Figure A.4: Positive correlation between changes in trade openness and changes in employment, 1995-2022



Source: Authors’ calculations, based on World Bank data on trade openness and International Labour Organization (ILO) data on employment to population ratio.

Note: The figure displays the percentage point changes in trade openness index and employment to population ratio between 1995 and 2022. The income groups are based on the 2022 World Bank classification.

correlation between trade and total employment tends to be marginally positive (see Figure A.4), millions of often higher-paid jobs are supported by trade.

As the economy grows and prices fall, more resources become available for investments in education, training and adjustment assistance, which can, in turn, help more people to take part in and benefit from economic growth. This virtuous circle can help to increase equality of opportunity, promote social inclusion and reduce extreme wealth disparities, especially among marginalized groups, if appropriate complementary policies are put in place.

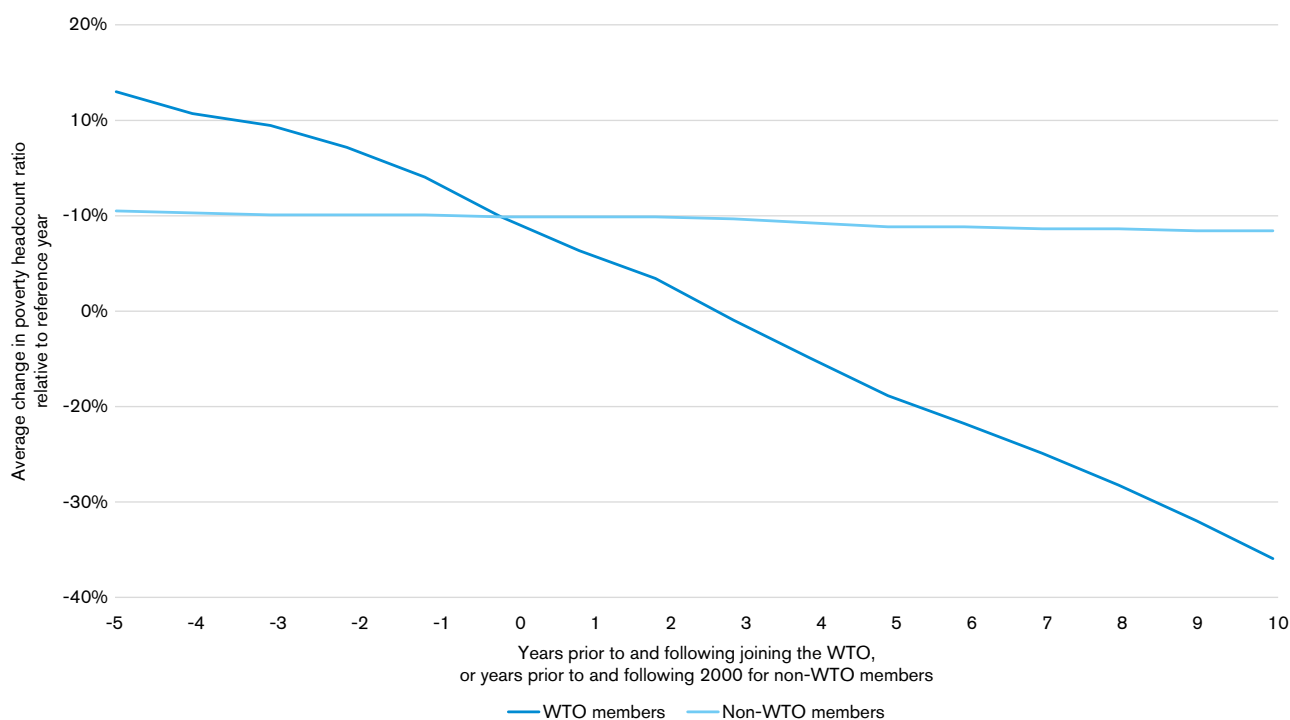
Over the past 30 years, income inequality has evolved differently across economies, with some experiencing significant decreases, but many others facing persistent or widening disparities. Global income inequality remains high in absolute levels, with the level observed in 2020 comparable to that of the early 1900s. Wealth inequality has also remained consistently high over the past three decades, although the share of personal wealth owned by the top 1 per cent decreased slightly, from 31.4 per cent in 1995 to 30.6 per cent in 2022. These trends have led some

to argue that international trade exacerbates inequality by only benefitting wealthy economies and individuals, while leaving marginalized groups and regions behind.

While some economies have grown more unequal as they have opened up and integrated into the global economy, many of the world's most successful and durable trade powers – especially advanced economies such as Germany or the Netherlands – are also some of the most equal in terms of income distribution and living standards. There is growing evidence that economies that have been less successful at sharing the cost and benefits of trade, and have experienced rising inequality, are finding it more difficult to sustain political support for more trade-opening, and face a growing backlash at home to globalization (Pastor and Veronesi, 2018; Acharya, 2022). This suggests not only that openness and equity can go hand-in-hand, but that prioritizing greater inclusion may be a critical part of any sustainable trade-led growth strategy.

Trade agreements can also help governments to implement and anchor pro-growth domestic reforms. Participating in a rules-based trading system incentivizes governments to uphold their market-

Figure A.5: Greater poverty reduction in WTO members than non-WTO members, 1990-2022



Source: Authors' calculations, based on World Bank data on poverty headcount ratio.

Note: The figure displays the average change in the percentage of the population living on less than US\$ 2.15 a day at 2017 purchasing power-adjusted prices relative to the poverty headcount ratio in the year in which a given GATT/WTO member joined the WTO. For non-WTO members, the reference year is set to 2000 due to data availability. Alternative reference years for non-WTO members do not change the trend. The average poverty reduction rate is calculated by taking into account the proportion of individuals living in poverty in each economy relative to the global population of individuals in poverty during the reference year.

opening commitments and to increase transparency and information-sharing, and can help to strengthen domestic institutions, to reinforce accountability, and to support and promote the rule of law. This can dramatically improve the environment for doing business in an economy by curtailing the scope for inconsistency and arbitrariness in policymaking.

Creating a more stable, predictable and level economic playing field benefits all economic actors, but it is especially empowering for the smallest and least powerful ones, such as micro, small and medium-sized enterprises (MSMEs), women entrepreneurs, small-scale farmers and artisans. Recent WTO analysis has found that WTO members experienced a faster drop in poverty than non-WTO members (see Figure A.5), and that developing economies acceding to the WTO that implemented more ambitious domestic reforms and made deeper trade opening commitments during their WTO accession negotiations than other GATT/WTO developing members grew, on average, 1.5 per cent faster than members that did not (Brotto et al., 2024).

These complex and inter-related policy challenges underscore the critical role that effective government plays in successfully harnessing trade for sustained inclusive growth. Successful trade-led growth strategies have, in particular, benefited from governments' ability to provide long-term stability, policy consistency and coherent direction (Spence, 2011).

Indeed, the pace and scope of global economic change today – and the need for economies to continually adjust and adapt – have raised the policy bar, rendering the roles of governments and other institutions more, not less, important, and their policy successes or failures more, not less, consequential.

While much of the world is converging, part of it is diverging

Many economies have experienced rapid growth and development in recent decades, but others are stalled or falling behind. Over the past 30 years, one third of economies classified as low- or middle-income grew at a slower rate than the average high-income economy. These diverging economies, representing 13 per cent of the world's population, are primarily in Africa, Latin America and the Middle East.

These economies are failing to keep up with a rapidly expanding world economy for varied and complex reasons, but a common feature is their inability either to use trade as a pathway to integration into the global economy, or to leverage their existing trade access to move up the value-added ladder, diversify

exports, and drive rapid growth. For example, the 46 least-developed countries (LDCs) – representing over 880 million people – only account for 1 per cent of world trade, a share which has been stagnant since 1995, and that actually shrank to less than 1 per cent over the last two years.

Some of the trade challenges these economies face are external: high tariffs that can penalize poor economies' exports; complex and fast-changing health and technical standards that resource-constrained economies often struggle to meet; and a growing global subsidies race that is distorting markets and tilting the economic playing field in favour of high-income and emerging economies.

But other trade obstacles these economies face are internal. For example, import restrictions, inefficient customs procedures, or poor transport and communications infrastructure can drive up their trade costs. A lack of coordination across trade-related policy areas, such as investment or trade financing, can reduce or negate the advantages of opening up to trade. Insufficient investment in productive capacity, technological upgrading and skills development, can also prevent many low-income economies, and even some middle-income economies, from diversifying out of agriculture and extractive sectors into more value-added exports.

As in the past, economic progress relies on adapting to changes in the economy. The ability of workers to transition from lower- to higher-productivity jobs, and from declining sectors to growing ones, is one of the key mechanisms by which trade promotes development and improves living standards. Today, a major difference is the speed, scale and scope of changes in the labour market caused by technological progress and open trade, as new goods and services, and even new industries emerge, requiring that others adapt or face decline.

For individuals, it may be necessary to relocate to find new employment, and this may involve significant financial or administrative obstacles. As economies become more knowledge-driven, securing new employment may depend on having more specialized skills, which may require retraining or earning additional certifications. Individuals with lower incomes, workers with fewer skills, small business-owners and some women may lack the skills, resources or flexibility to adjust to new trade opportunities, and are more likely to be adversely affected by economic change. In the absence of adequate policy responses, the gap between those who can adapt to and benefit from economic change, and those who cannot, may widen, increasing inequality.

Moving towards more inclusive globalization presents opportunities and challenges

The ability of more economies to harness inclusive trade-led growth will be a critical factor in determining whether the world economy continues to converge or begins to diverge again. The good news is that today’s global economy offers more opportunities for trade-led growth than ever before. The bad news is that the global economic system is itself facing new tensions that could restrict or roll back these new opportunities and cut short “the Great Convergence”.

One positive development is the expansion of global demand. Developing economies are no longer dependent on access to advanced-economy markets alone to drive trade-led growth; increasingly, they can look to export to fast-expanding emerging markets as well.

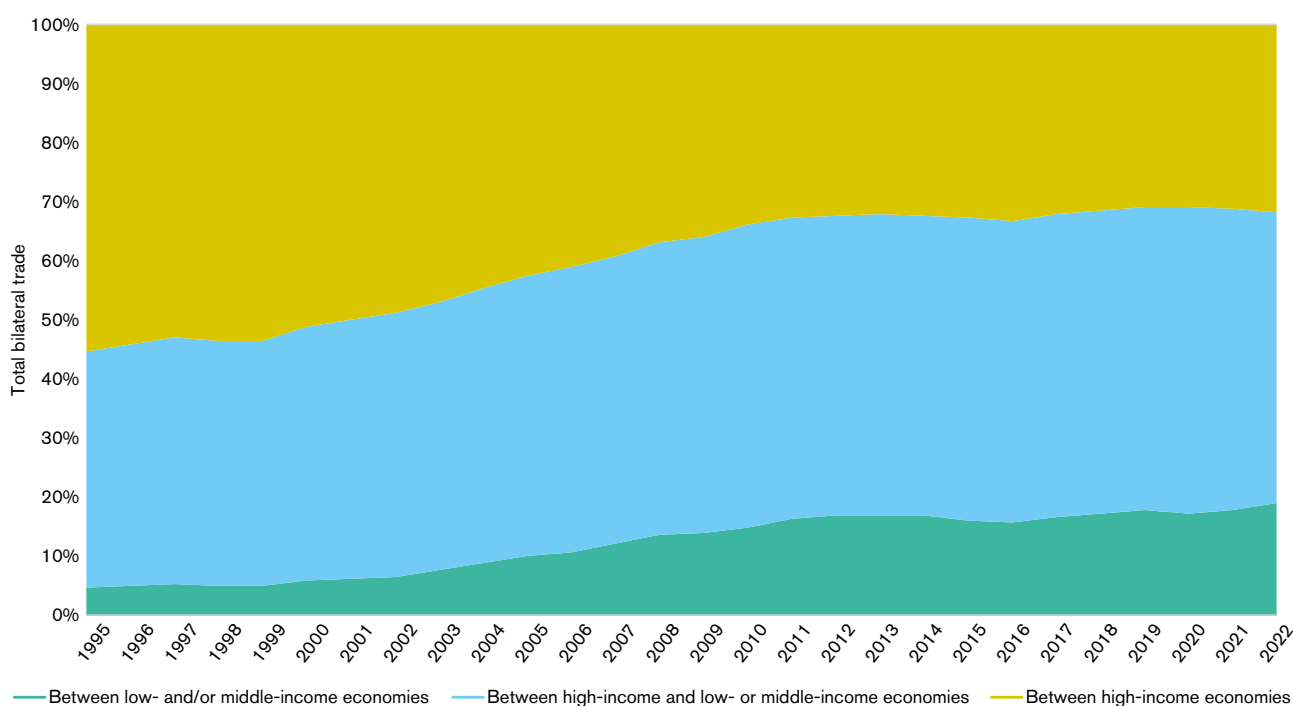
These emerging economies are generating enormous new demand for food, energy, minerals and manufacturing inputs – which is in turn pulling other developing economies into their slipstream. And as these developing economies begin their own economic lift-off, they become new trade growth engines as well.

South-South trade – that is, trade among the emerging and developing economies of the “Global South” – has grown from 8 per cent of world trade in 1995 to around 25 per cent today, and at current trends it could reach 30 per cent by 2030 (see Figure A.6).

Another positive development is that technological advances continue to improve global connectivity and drive down trade costs. New investments in transport infrastructure are expanding global trade routes and making them more efficient, helping to link up even the most distant or landlocked suppliers to foreign markets. Trade corridors between Asia and North America, and between Asia and Europe, now surpass the transatlantic trade corridor between North America and Europe, while trade corridors between Africa and Asia or Latin America and Africa are growing in importance.

The spread of digital networks – underpinned by the internet, lower-cost telecommunications and new digital platforms – is changing the way economies connect to the global economy in even more fundamental ways. Some developing economies and groups within economies, including small businesses owned by women, that have often been excluded from global services markets in the past – because services trade typically require geographical proximity

Figure A.6: Increasing trade between low- or middle-income economies, 1995-2022



Source: Authors’ calculations, based on WTO data on merchandise bilateral trade.

Note: The figure displays the composition of global merchandise trade flows by income group. The analysis excludes trade within the European Union (i.e., intra-EU trade). The income groups are based on the 1995 World Bank classification.

– are fast becoming services exporters, because new digitally delivered services, such as online distribution, telemedicine and online business services can be delivered from any location on the planet that has internet access.

This new services trade can offer developing economies advantages that goods trade does not: it can be less capital-intensive, and less constrained by distance and infrastructure requirements (WTO, 2019). Indeed, some developing economies are bypassing the industrialization phase altogether and are leapfrogging from agriculture to services exports (Nayyar, Cruz and Zhu, 2021).

One of the most significant positive changes is that developing economies can now look to other developing economies for inspiration and models for how to pursue trade-led growth strategies. In the same way that “early globalizers” such as Japan, the Republic of Korea and Singapore helped to blaze a trail for other Asian economies in the 1980s and 1990s, today’s “new globalizers” are, in turn, providing powerful examples for the next generation of developing economies seeking to leverage trade for faster growth.

However, the ability to harness trade for even wider global growth hinges fundamentally on the world economy remaining open. Here there is cause for concern.

Trade openness and integration have slowed over the past decade and a half following a series of shocks to the global economy – such as the global financial crisis, the COVID-19 pandemic and wars in Ukraine and the Middle East – and the rise of geoeconomic and geopolitical tensions. If today’s open world economy starts to fragment as a result of rising protectionism, economic nationalism and restrictive trade blocs, it will harm the growth prospects of all economies, but the poor and economically marginalized will suffer the most (WTO, 2023c).

The structure of this report

This year’s *World Trade Report* explores how trade has helped to widen the circle of global growth, why some economies, regions and groups are still being left behind, and what can be done domestically and internationally to ensure that millions more people can harness trade to accelerate growth, “level up” with the rest of the world, and create a more inclusive global economy.

While the concept of inclusiveness can vary based on context and perspective, the core idea, in terms of

international trade, is to reduce barriers and obstacles that currently prevent marginalized economies, regions and groups (including minorities, vulnerable people and workers) from participating fully in and benefitting from global markets.

The report makes the case that trade is a key part of the solution to creating a more inclusive global economy, but that it requires more coherent and mutually supportive policies at the national and international level.

Chapter B focuses on the impact of trade on inclusiveness across economies. It explores how trade has driven rapid growth across several key emerging and developing economies since the mid-1990s, significantly accelerating convergence and narrowing inequality. It also examines why some economies and regions have so far failed to harness trade as a driver of sustained growth, either because they not sufficiently integrated into the global economy, or because they are limited to exporting low-value-added or highly volatile commodities. Common challenges that these economies and regions face include high trade costs, weak institutional capacity, geographical isolation and infrastructural deficits. This chapter points out that some trade policies can hinder economic convergence, while others may not achieve the desired effects. It also argues that geopolitical tensions, a failure to bridge the digital divide and disjointed efforts to address environmental crises can create new challenges for poor economies trying to integrate into the global economy, that only concerted international action and cooperation can overcome.

The focus of Chapter C is on the impact of trade on inclusiveness within economies. It highlights that, while economies as a whole have benefited from open trade and global integration, certain groups of individuals (such as low-skilled workers in some sectors and certain groups of women), types of firms (such as MSMEs) and regions (such as rural areas) have not. Factors that have prevented people from participating in and benefitting from trade include limited mobility, low skills, restricted access to capital, technological barriers, inadequate infrastructure, and political and legal obstacles. This chapter points out that some types of trade policies, such as protective tariffs or export restrictions, can fail to achieve the desired effects, or even exacerbate inequality. The chapter emphasizes that open trade remains essential to reduce poverty, but also warns of the risks that food insecurity, the digital divide, and winner-take-all economies can cause for the poor.

Chapter D reviews the role of the WTO and international cooperation in addressing inclusiveness both across

and within economies. The WTO already promotes economic growth and inclusiveness by fostering rules-based, non-discriminatory and predictable trade relations and by improving governance through credible economic reform. This chapter notes that many complementary policies for development and inclusiveness require credible, transparent and coherent trade policy to be more effective, and vice versa. It discusses how making further progress in economic convergence and inclusiveness, requires balancing credible WTO commitments and relevant flexibilities (i.e., special and differential treatment

for developing members), while implementing complementary policies and strengthening international cooperation. It calls for reducing trade costs, accelerating the accession to the WTO of new members, ensuring equitable dispute resolution, and providing technical assistance to strengthen members' capacity to implement WTO commitments and related-domestic policies. Enhancing inter-agency cooperation can further help to leverage synergies between trade and complementary policies for development and inclusiveness, and to promote policy coherence and mutual supportiveness.

B Trade and income convergence

The past quarter of a century has witnessed an unprecedented level of income convergence, accompanied by the integration of many developing economies into global markets. Despite this, some economies have been left behind. This chapter discusses how the participation of developing economies in global trade and investment flows can accelerate structural transformation and enhance productivity growth, thereby helping low- and middle-income economies to achieve the economic growth that ensures convergence with high-income economies. The chapter also examines why some economies have taken little advantage of globalization, and focuses on barriers to maximizing the gains from trade participation, such as trade costs and commodity dependence. Finally, the chapter discusses how recent trends in the global economy are shaping future opportunities and challenges for developing economies to leverage trade and foreign direct investment for economic growth, and which policies can help to achieve convergence in the upcoming decade.

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Key points

- Trade expansion during the period 1995-2020 led to 30 per cent faster income convergence of low-income economies. Despite this, their income convergence and integration into the global economy have been uneven, and some economies have been left behind.
- Developing economies and least-developed countries (LDCs) have high trade costs relative to high-income economies. Manufacturing and services trade is around 50 per cent more difficult for LDCs than for high-income economies.
- Commodity dependence exposes economies to high volatility and can negatively impact the development of other sectors, often hampering sustained growth.
- Foreign direct investment (FDI) can play an important role in helping economies to adopt new technologies and complex production processes, but middle-income economies remain relatively less open to FDI than high-income economies.
- Emerging global trends, such as geopolitical tensions, digital revolution and climate change, are reshaping trade-led development, presenting new threats to convergence, but also creating new opportunities.
- Developing economies can capitalize on future trade opportunities by tackling trade costs, promoting diversification based on comparative advantages, and maximizing trade growth dividends by improving domestic infrastructure and the business environment, and by facilitating technology adoption.

1. Globalization has led to income convergence, but some economies have been left behind

The world has become more equal over the past three decades. Until the 1990s, there was little evidence of poorer economies catching up with richer ones, a phenomenon known as unconditional convergence. However, since the mid-1990s, economic growth has been unambiguously characterized by unconditional convergence (Patel, Sandefur and Subramanian, 2021; Kremer, Willis and You, 2022). This has been due mainly to faster catch-up growth in poorer economies, although the simultaneous slowing of growth in richer economies has also contributed. Consequently, income inequality among economies has been decreasing for the last quarter-century. Only the shock of the COVID-19 pandemic ended this era of unconditional income convergence.

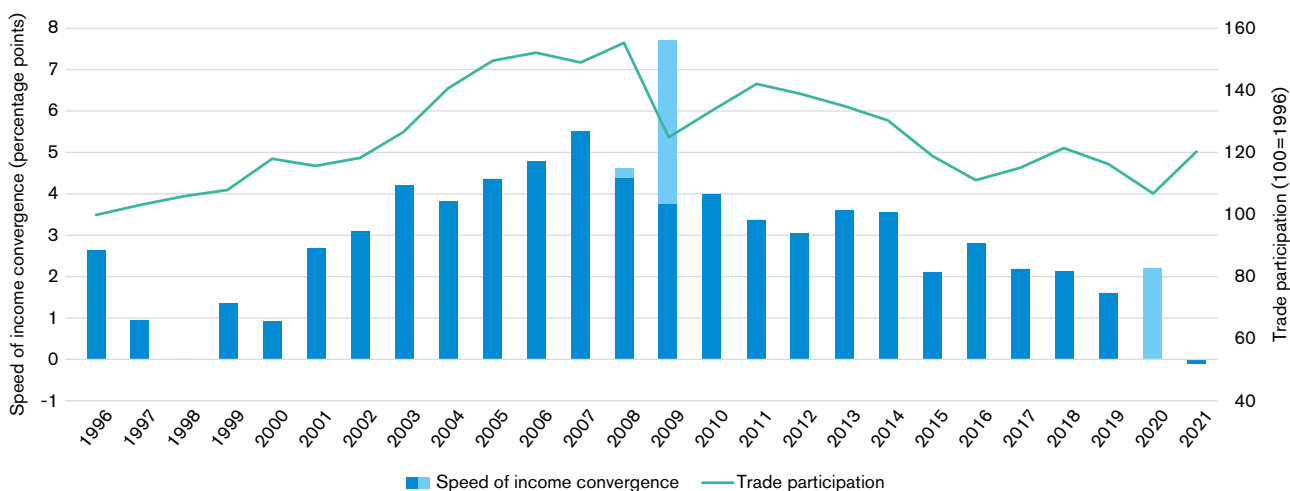
Richer economies have a lower poverty rate, higher levels of education and longer life expectancies. Although income per capita is an imperfect measure of development, it is correlated with several dimensions of human development. Thus, the era of global income convergence has been accompanied by a stark reduction in the global poverty rate¹ and has contributed to United Nations Sustainable Development

Goals, such as those associated with education and health. According to data from the World Bank, the global share of people living in extreme poverty declined from 32.7 per cent in 1995 to 9 per cent in 2022, even though the global population rose by 38.7 per cent during the same period.

The period of unprecedented income convergence has been accompanied by a steep increase in trade participation (see Figure B.1). While part of this correlation may be related to the fact that economic growth leads to more trade and that other common factors can cause an increase in both income per capita and trade, a compelling set of empirical research suggests that more trade also leads to higher incomes (see Figure B.1) (Feyrer, 2019, 2021; Cerdeiro and Komaromi, 2021).² Comprehensive trade liberalization in developing economies has been shown to increase income growth by an average of 1.0 to 1.5 percentage points, resulting in incomes higher by 10 to 20 per cent after a decade (Irwin, 2024). Trade has been an essential component of high-growth episodes that typically involved a shift of capital and labour to the tradeable manufacturing sector and intensified imports of capital goods (World Bank, 2024a).

Low- and middle-income economies have become dominant in global merchandise trade. The increased trade participation of low- and middle-income economies has transformed the global trade

Figure B.1: Positive correlation between low- and middle-income economies' convergence speed and trade participation, 1996-2021



Source: Authors' calculations, based on World Bank data on nominal GDP and real GDP per capita and WTO data on trade in goods and commercial services.

Note: The figure displays the evolution over time of the population-weighted averages of trade participation and income convergence speed between 1996 and 2021. The trade participation index is the share of goods and commercial services trade in GDP, adjusted for country size. Speed of income convergence is expressed as the difference between the average real GDP per capita growth rate of low- and middle-income economies and the average growth rate in high-income economies. The light blue fill indicates a contribution of negative growth in high-income economies. The income groups are based on the 1995 World Bank classification.

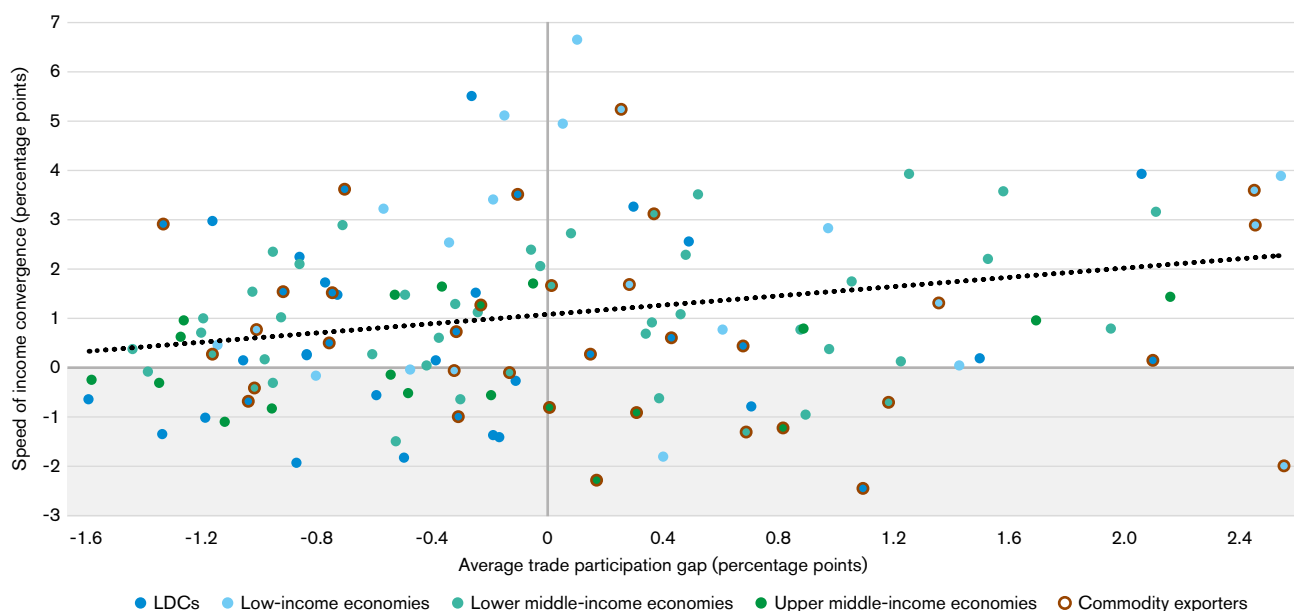
landscape. In 1995, more than a half of merchandise trade flows were among high-income economies, and only 5 per cent of global merchandise trade was exchanged within the low- and middle-income group. By 2021, the latter figure had jumped to 19 per cent, while the share of merchandise trade among high-income economies had dropped to 32 per cent. Exchanges between the two groups of economies now dominate global merchandise trade.³ The share of least-developed countries (LDCs) in global trade increased rapidly between 2000 and 2014, but has stagnated since then at around 1.2 per cent.

However, income convergence and integration into the global economy have been uneven, and some economies have been left behind. Figure B.2 shows the relationship between trade participation and income convergence over the past quarter of a century by country income group. First, it confirms that faster income convergence is typically associated with higher trade participation, as highlighted in Figure B.1. Second, although two-thirds of low- and middle-income economies experienced income convergence between 1996 and 2021, one third did not converge. These “diverging” economies account for 13 per cent

of the global population, and they represented several income groups, as 43 per cent of them were low-income, 30 per cent were lower-middle-income and 27 per cent were upper-middle-income in 1995. Finally, many of the converging economies are catching-up very slowly. If they were to grow at the same pace as in the past three decades, a third of the low-income converging economies would not even reach middle-income status within the next three decades.⁴

Diverging economies are concentrated in certain regions, and many are LDCs. The Middle East and North Africa had the highest proportion of diverging economies (56 per cent), followed by sub-Saharan Africa (42 per cent) and Latin America and the Caribbean (40 per cent). All but one of the small Pacific Island states for which data are available also fell into this group,⁵ while there were no diverging economies in Asia or Europe. The majority (71 per cent) of the diverging low-income economies were LDCs, compared to 56 per cent of the converging low-income economies. All of the LDCs that have graduated from their LDC status (except Vanuatu) were in the converging group, as well as the LDCs proposed for graduation in 2026.

Figure B.2: Many low- and middle-income economies are lagging behind, 1996-2021



Source: Authors’ calculations, based on World Bank data on nominal GDP and real GDP per capita and WTO data on trade in goods and commercial services.

Note: The figure displays the correlation between trade participation and convergence speed of economies that were low- or middle-income in 1995. The trade participation gap is the share of goods and commercial services trade in GDP, adjusted for country size, expressed as a percentage difference from the income group average. Income convergence speed is the annualized real income per capita growth between 1996 and 2021 expressed as the difference from the average growth in high-income economies. Economies below the horizontal axis did not converge in their per capita incomes towards high-income economies. Economies on the left of the vertical axis had an average trade participation below their income group average. The income groups are based on the 1995 World Bank classification. The LDC group is based on the United Nations (UN) classification.

Three-quarters of diverging economies exhibited trade participation that was below the average of their income group.

In some of the economies that have been left behind, economic activity, including trade, has been stunted by prolonged conflict and political instability.⁶ In others, as discussed in Section B.3(a), participation in international trade is hindered by trade policies, poor infrastructure, remote geographical locations and institutional environments that weigh particularly heavily on foreign transactions.

The remaining quarter of diverging economies, mostly commodity exporters, saw slow income growth despite relatively high trade participation.

Most of this high-trade but slow-growth group consists of commodity-dependent economies in which trade participation has not led to structural transformation and diversification. Income levels, together with the size of the economy, typically determine the degree of diversification. However, resource-rich economies often exhibit lower levels of diversification compared to their peers at similar income levels. Section B.3(b) further discusses how the failure to diversify and move into modern sectors can prevent economies from achieving sustained growth despite high trade participation.

There are significant differences in the degree and scope of trade participation between fast-growing economies and those lagging behind.

Table B.1 summarizes the characteristics for the different groups of economies. It shows that economies that have lagged behind, e.g., diverging economies

and LDCs, have had lower trade participation, were more likely to be commodity-dependent, and have had lower export complexity and a higher concentration of trade partners than their peers that started in the same income group. On the other hand, economies that grew fast enough to move to a higher income group had higher trade participation, were less likely to be commodity-dependent, and had higher export complexity and a lower concentration of trade partners than their peers that remained in the same group, as did economies that have graduated (or are scheduled for graduation in 2026) from their LDC status compared to the LDC group average.

Trade participation and diversification are intertwined with the production activity of multinational companies, which can be an important conduit for technology diffusion and economic upgrading (see Section B.2(c)).

It is therefore not surprising that the group of diverging economies and LDCs cited above have also received considerably less foreign direct investment (FDI) compared to peers that started in the same income group (see Table B.1). Indeed, FDI inflows to low- and middle-income economies in the Middle East and North Africa and in sub-Saharan Africa, where diverging economies are concentrated, lag behind other regions. Even within sub-Saharan Africa, there is high disparity, with Congo, Ghana, Mozambique, Nigeria and South Africa receiving more than 50 per cent of the FDI flows to the region.

Table B.1: Differences between fast-growing economies and those lagging behind

	Diverging economies	LDCs	Economies graduated from LDC status	Economies reaching a higher income group
Trade participation	-15%	-14%	8%	17%
Commodity dependence	+2.5 p.p.	+3.5 p.p.	-17.5 p.p.	-3.2 p.p.
Export complexity	-65%	-48%	+46%	+23%
Partner concentration	+12%	+18%	+28%	-10%
FDI participation	-35%	-16%	+18%	+14%

Source: Authors' calculations, based on UNCTAD data on inward FDI flows, World Bank data on nominal GDP, real GDP per capita and the Herfindahl-Hirschman index of imports and exports, WTO data on trade in goods and commercial services, and Harvard Growth Lab data on export complexity.

Note: The table compares different metrics of diverging economies, LDCs and economies that reached a higher income group to the average of their 1995 income group over the period 1995-2021. Economies that have graduated from LDC status (including those proposed for graduation in 2026) are compared to the average of the LDC group. "Commodity dependence" refers to the share of commodity-dependent economies in the group, defined as having more than 50 per cent of exports concentrated in one commodity in any given year. "Export complexity" is the average complexity of products in which the economy has revealed comparative advantage. "Partner concentration" is the average Herfindahl-Hirschman index of imports and exports. "FDI participation" is the average share of FDI inflows in GDP. The income groups are based on the World Bank classification. The LDC group is based on the United Nations (UN) classification; "p.p." refers to percentage points.

2. How did the integration of low- and middle-income economies into global markets boost income convergence?

Sustained and inclusive income growth is driven by continuous improvements in economy-wide labour productivity. This can be achieved by investing in human and physical capital, and by adopting new technologies. With the exception of a few economies rich in natural resources, there are no examples of low-income economies that have successfully become high-income economies without improving their production technology levels (Cirera, Comin and Cruz, 2022). Moreover, achieving sustained growth in the early stages of economic development requires productivity growth in activities that are labour-intensive and that underpin the transition from a subsistence economy to an economy characterized by specialization and the smooth exchange of goods and services, both domestically and with other economies. Hence, the typical path of a fast-growing, initially poor, economy between 1990 and 2018 involved a fast productivity increase in four sectors: manufacturing, wholesale and retail trade, transport, and business services (Herrendorf, Rogerson and Valentinyi, 2022).

Structural transformation that shifts employment to more productive sectors and firms can be another important source of economy-wide labour productivity growth. In the early stages of economic development, structural transformation typically means a shift from subsistence agriculture to industry and commercial services, from the informal to the formal sector, and from state-owned to private (often foreign-owned) firms (McCaig and Pavcnik, 2013; Gollin and Kaboski, 2023). It is estimated that labour reallocations between broad economic sectors accounted for one half of productivity growth in low-income economies between 1995 and 2017, and for four-fifths of productivity growth in sub-Saharan Africa, specifically (Dieppe, 2021; Erumban and de Vries, 2021).⁷

Outward-oriented development strategies have underpinned the success of most fast-growing developing economies that have undergone structural transformation in the past three decades. Successful development strategies have combined access to international markets, know-how and financing with investment in infrastructure and education, friendly and stable business environments, and capable administration. Rather than using protectionist trade policy to develop indigenous

modern sectors by sheltering domestic firms from foreign competition, fast-growing economies have gained access to modern production technologies by attracting foreign investment, providing incentives to improve firm productivity and facilitating access to foreign markets (Juhász, Lane and Rodrik, 2023).

Openness to international trade and investment can boost structural transformation and productivity growth through several channels. Trade and investment liberalization have accelerated structural transformation in many economies by drawing workers from less productive to more productive activities. Globalization also increased productivity within sectors by increasing the size of the markets that firms can access, thus fostering economies of scale and boosting the incentive to innovate, by intensifying competition in the domestic economy and facilitating access to foreign technology, knowledge, know-how and to a larger variety of intermediate inputs of higher quality or at cheaper prices. FDI, especially in the context of global value chains, has played an important role in the diffusion of new technologies, innovation and production upgrading, particularly in middle-income economies. A study of 27 emerging economies shows that both competition from foreign firms and linkages with foreign firms, as buyers or suppliers, increase product innovation, the adoption of new technologies and quality upgrading (Gorodnichenko, Svejnar and Terrell, 2010).

(a) Export-led structural transformation increases aggregate productivity

By accelerating structural transformation that draws workers into more productive firms and activities, specialization according to comparative advantage can give rise to export-led growth. A typical characteristic of low-income economies is that a large share of employment is in informal subsistence farming and household businesses, which tend to have lower productivity and pay lower wages than the formal sector. A recent study provides causal evidence that the reduced trade policy uncertainty following China's WTO accession accelerated the structural transformation of the Chinese economy by stimulating investment and output in both manufacturing and service sectors (Erten and Leight, 2021). Their estimates suggest that the resulting shift of workers from agriculture to the more productive manufacturing sector led to an increase in economy-wide labour productivity in the range of 10 to 38 per cent between 2002 and 2013.

Evidence from several developing economies suggests that export-driven labour shifts from

informal to formal businesses can improve productivity, even within the exporting sector. In Viet Nam, the 2001 trade agreement with the United States helped to accelerate Viet Nam's structural change by propelling its exports of manufactured products, such as footwear and textiles (see Box B.1). While two-thirds of manufacturing workers were still employed in informal household businesses in 2002, the improved access of manufacturing exporters in Viet Nam to the US market led to the expansion of formal employment opportunities. This reduced informal employment in Viet Nam's manufacturing sector by around 7.5 per cent in the first two years following the trade agreement, increasing labour productivity within the sector by 1.5 to 2.8 per cent per year (McCaig and Pavcnik, 2018). During this adjustment period, the influx of new entrants was critical in generating formal manufacturing, with foreign firms playing an important role (McCaig, Pavcnik and Wong, 2023). Similar export-led shifts of workers into formal employment have been documented in Bangladesh, Botswana, Brazil and Cambodia (Costa, Garred and Pessoa, 2016; Goutam et al., 2017; McCaig and McMillan, 2020; Tanaka and Greaney, 2024).

While export-led growth can foster the formal sector in developing economies, certain factors may also cause informal jobs to persist. When exporting firms are highly capital-intensive, their expansion generates few new employment opportunities and therefore has limited impact on aggregate labour productivity improvements. In Ethiopia and Tanzania, in 2008-16 and 1996-2017,

respectively, large formal manufacturing businesses expanded and increased the share of manufacturing value added in GDP. However, these large firms did not expand their employment, while informal manufacturing and services firms did (Diao et al., 2021). In Bangladesh, exports more than doubled in real terms between 2002 and 2010, boosting formal employment. Yet, the formal share of employment remained nearly constant at around 15 per cent during that period because informal employment also expanded. This may be because the indirect demand generated through domestic supply chain linkages and through higher incomes raised the consumption of local services (Goutam et al., 2017).

Export-driven expansion helps to improve productivity in exporting firms by enabling economies of scale and incentivizing the adoption of new technologies. Small market size and low purchasing power in poor economies can hinder the adoption of new technologies. The larger scale of production enabled by exports raises revenues from innovation and technology adoption, motivating firms to incur the costs of implementing new technology or investing in research and development (R&D), thereby increasing productivity (Aw, Roberts and Xu, 2011; Bustos, 2011). Furthermore, the effect of market expansion can ripple through the economy along the supply chain. When an exporter increases its production, its suppliers can benefit from the larger scale as well (Linarello, 2018). Based on data from 94 economies over the period 1981-2015, Goldberg and Reed (2023b) argue that, without access to the

Box B.1: Viet Nam's export-driven structural transformation and FDI-driven export upgrading

Viet Nam's economy in the 1990s was based on agriculture, fishing and food products. Like many poor economies, Viet Nam was characterized by large differences in productivity across sectors, especially between agriculture and manufacturing and some services (McCaig and Pavcnik, 2013).

During the 1990s and 2000s, Vietnamese workers moved out of low-productivity agriculture toward higher-productivity manufacturing and services. These movements accounted for more than a third of the aggregate productivity growth during this period. Resource reallocation within sectors also contributed to labour productivity improvements, as workers moved from less productive household businesses toward more productive registered firms in the enterprise sector, and from state-owned enterprises toward more productive private domestic and foreign-owned firms.

Viet Nam's trade agreement with the United States in 2001 significantly boosted its labour-intensive manufacturing exports, such as footwear and textiles. The trade policy certainty resulting from the integration of Viet Nam into the multilateral trading system paved the way for inward FDI, which has grown exponentially since 2006 and has driven the rapid rise of Viet Nam's comparative advantage in more complex manufacturing, such as electronics, especially mobile phones (Samsung) and computer chips (Intel). At its peak in 2018, Samsung accounted for a quarter of Viet Nam's exports, providing an example of how important multinational enterprises (MNEs) can be for an economy's trade capacity and composition.

global market, the average low- or middle-income economy would not have a large enough domestic market to achieve sustained poverty reduction. Finally, information exchange with large foreign buyers (often trade intermediaries) can provide the know-how for technology upgrading. Coupled with the potential for large orders from a market that values high quality, these interactions can lead to improved quality and productivity (Atkin, Amit and Osman, 2017; Bold et al., 2022).

(b) Better access to imported products and import competition can enhance firm-level productivity

Improved access to imported intermediate inputs can enhance productivity within domestic firms and industries. By incorporating high-quality materials, components, services and technologies from abroad, businesses can streamline their production processes, improve product quality and reduce costs. This not only strengthens the competitiveness of domestic industries on the global stage, but can also foster innovation and efficiency improvements. Several studies from developing economies show that firm productivity and competitiveness increases with imports of intermediate inputs, especially those with high technology content (Kasahara and Rodrigue, 2008; Topalova and Khandelwal, 2011; Gopinath and Neiman, 2014; Halpern, Koren and Szeidl, 2015; Boehm, Levchenko and Pandalai-Nayar, 2023). Cheaper access to foreign intermediate inputs also raises the relative return to using modern technologies which incentivizes their adoption. A recent study focusing on the agriculture sector suggests that reductions in the trade costs of agriculture inputs, such as fertilizers, machinery and pesticides, led to significantly higher shares of land farmed using modern technologies, especially in middle-income economies (Farrokhi and Pellegrina, 2023). Finally, access to a larger variety of intermediate inputs helps firms to introduce new products (Goldberg et al., 2010; Fieler, Eslava and Xu, 2018).

Import competition may also lead to higher productivity and increased innovation. In theory, increased competitive pressure from imports erodes the profits of domestic firms which, depending on the underlying market conditions, either reduces their innovation and productivity by shrinking their resources and motivation to innovate, or increases their innovation and productivity by motivating them to escape or adapt to the competitive pressure (Aghion et al., 2005). Empirical studies have found that, on balance, productivity and innovation may

increase with increased import competition (Amiti and Konings, 2007; Topalova and Khandelwal, 2011; Shu and Steinwender, 2019). The positive effects of foreign competition on innovation by domestic firms have been found for both manufacturing and service sectors and seem to not depend on the underlying degree of competition in the industry (Gorodnichenko, Svejnar and Terrell, 2010) Evidence from Colombia also shows that tariff liberalization had a strong positive impact on the productivity of firms facing import competition, particularly benefiting larger firms and those in less competitive industries (Fernandes, 2007). Furthermore, import competition forced the least productive firms to exit the market, which had a large positive impact on aggregate productivity (Eslava et al., 2013).

(c) Participation in global value chains and FDI facilitate the diffusion and adoption of new technologies, improve productivity and drive export upgrading

Participation in global value chains (GVCs) can be a powerful channel for technology transfer. By integrating into GVCs, firms in developing economies can gain access to technology not only embodied in imported inputs, but also directly transferred by the headquarter firms. Since outsourcing involves a high degree of interdependency in terms of production in different economies, headquarter firms are more willing to transfer the know-how, management practices and technology required for an efficient and seamless production of the outsourced inputs. Empirical evidence suggests that GVC participation has strong positive effects on productivity growth in the formal manufacturing sector in low- and middle-income economies (Pahl et al., 2022). The impact of GVC-related knowledge spillovers may go beyond a one-off boost to productivity by spurring domestic innovation that is key to sustained growth, especially in middle-income economies (Piermartini and Rubínová, 2021).

FDI can play an important role in accelerating the host economy's growth and its adoption of more complex production processes. Foreign firms bring intangible assets, such as new production processes, management know-how and established brand names. They also bring skills, and help the diffusion of knowledge through employee training and interactions with local buyers and suppliers. Finally, the global production networks of MNEs provide access to major markets and to imported intermediate inputs. Through all these channels, FDI has the potential to increase productivity and innovation in the

host economies, helping them to achieve sustained economic growth and avoid the middle-income trap – a situation when middle-income economies fail to shift from growth strategies based on cheap labour and capital accumulation to strategies driven by R&D investment and innovation (Gill and Kharas, 2007).

Diversification and export upgrading in many developing economies has been driven by MNEs.

Individual firms can play a pivotal role in determining the comparative advantage and specialization of economies. Empirical evidence shows that most of the top five exporters in developing economies are MNEs, and that they accounted for almost half of export growth and for a third of export expansion into new products and/or markets in the 2000s and early 2010s (Freund and Pierola, 2020). Examples of economies in which MNE investment led to a shift in revealed comparative advantage, from relatively low-skill products to new complex ones, include Costa Rica, Malaysia, Morocco and Viet Nam (see Box B.1 on Viet Nam and Box B.2 on Costa Rica). The respective economy's comparative advantage in these cases was shaped by local characteristics, such as the availability of specific human

capital, infrastructure or trade openness, and combined with the know-how, technology and management brought by MNE investments in that economy (Freund and Moran, 2017).

Foreign-owned firms can further help to boost economic performance by improving the productivity of their locally owned buyers and suppliers.

Evidence suggests that MNEs in upstream sectors may offer local buyers more diverse and higher quality intermediates and capital goods, thereby boosting their productivity, export quality and product scope. Moreover, vertical linkages with local suppliers encourage the adoption of international best practices and management techniques, as well as creating possibilities for cooperation on the development of new and better quality products.⁸ As domestic firms enter MNE supply chains they may also acquire the knowledge and skills essential for exporting, and often start exporting to the economies in which the MNE is headquartered, has affiliates or has established customers. These experiences can lead to significant productivity gains, driven by an improved ability to acquire new buyers (Carballo, Ottaviano and

Box B.2: FDI-driven economic diversification and upgrading in Costa Rica

Costa Rica's economic landscape has undergone a remarkable transformation over the past three decades, marked by a policy focus on attracting sustainable FDI. This shift propelled the country from reliance on tropical fruit exports and tourism to a diversified economy anchored in high-tech manufacturing and service sectors. Costa Rica's income per capita growth was on average 2.4 per cent between 1995 and 2021, moving the economy into the upper-middle-income group.

The economic transformation is reflected in the evolution of Costa Rica's revealed comparative advantage. In the 1990s, the economy specialized predominantly in agricultural products and tourism, but since the 2000s, it has been increasingly shifting into complex manufacturing sectors and high-skill services. Notably, after 2015, comparative advantages in manufacturing medical and surgical equipment and in providing professional, scientific and technical services have grown exponentially, underlining Costa Rica's transition to a diversified modern economy.

FDI has played a catalytic role in this economic shift. A pivotal moment for the Costa Rican economy came in 1998, with the establishment by the technology firm Intel of an assembly and testing facility for computer chips, which increased Costa Rica's attractiveness to technologically advanced manufacturers. The medical devices sector followed suit, with major players like Boston Scientific, Allergan, ICU Medical and Baxter establishing or scaling up operations (Martinez and Padilla, 2017). Intel's investment in the training of its employees and collaboration with public universities has built up Costa Rica's absorptive capacity, creating a fertile environment for knowledge transfer and for the further creation of new business opportunities (Rodríguez-Clare, 2001).

Although Intel moved its manufacturing production to Asia in 2014, the medical devices sector has continued its evolution from low-cost manufacturing to specialized processes and has become Costa Rica's main manufacturing specialization. Moreover, Intel has continued to rely on its investment into Costa Rica's workforce by setting up an R&D facility and a corporate services centre for its global operations, driving the economy's exports of scientific, professional and technical services.

Volpe Martincus, 2018; Alfaro Ureña, Manelici and Vasquez, 2022).

Even local firms outside MNE supply chains can benefit from better supplier bases and from hiring workers with skills acquired in MNEs.

As discussed above, local suppliers of MNEs improve their productivity as well as product quality and variety. These improvements also benefit local firms that share suppliers with MNEs, leading to product scope expansion and higher productivity. Further, either by observing the foreign firms or by means of hiring former MNE employees, local firms can learn about procedures that improve the quality and standardization of their products, their marketing skills, and the reliability of their shipments. When domestic managers work at MNEs and gain exposure to high-quality management practices, they can transfer this knowledge to new workplaces when they switch jobs (Poole, 2013; Bloom et al., 2020; UNCTAD, 2021c).

Yet, the mere presence of or connections to MNEs may not guarantee the spillover of tacit knowledge such as management practices.

While significant spillovers of management knowledge often occur within firms, improvements can be short-lived and easily reversed when managerial turnover takes place (Bloom et al., 2020). Moreover, language barriers can be a critical obstacle to the spread of foreign managerial practices to domestic managers. Using randomized controlled trials in firms in Myanmar, one study found that reducing language barriers through subsidized English lessons can enhance the transfer of management knowledge (Guillouet et al., 2024).

Technology transfer is facilitated by the presence of an adequate institutional environment, openness and investment into education and research.

To exploit a new foreign technology, firms need to have sufficient absorptive capacity to enable them to learn how to use it, as well as, potentially, to adapt a technology developed abroad to local conditions. Adoption of new technologies requires high-skilled workers and high-quality inputs. However, these may be scarce and expensive for firms in developing economies, and this may limit technological progression (Alfaro-Serrano et al., 2021). Firms in low-income economies may find technologies from high-income economies too advanced to adopt; an important reason for this is inconsistent access to electricity, which has prevented many low-income economies from completing previous technology revolutions, therefore also making it difficult for them to adopt the latest technologies (Cirera, Comin and Cruz, 2022). In addition, the quality of education, the number of skilled

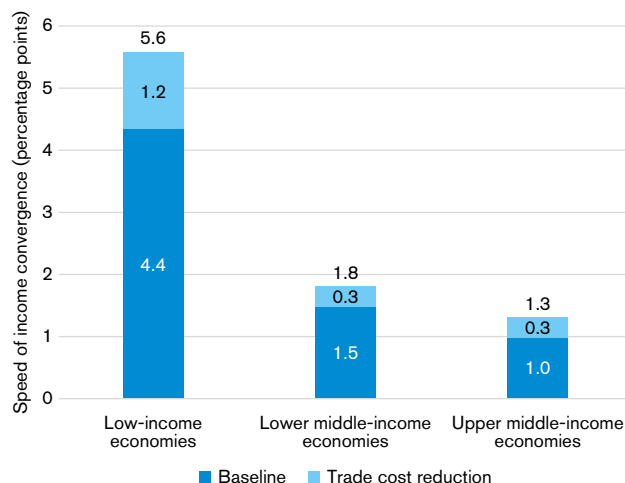
workers and the resources spent on public research are important factors in improving absorptive capacity in an economy (Augier, Cadot and Dovis, 2013; Piermartini and Rubínová, 2021). Collaboration between industry and research institutions is also crucial to adapt foreign technologies to domestic conditions (see Box B.2).

(d) Trade costs reduction have helped to accelerate income convergence

Trade cost reductions and the resulting trade expansion have significantly contributed to income convergence.

A simulation analysis using the WTO Global Trade Model suggests that trade cost reductions between 1995 and 2020 led to around a 6.8 per cent increase in global real GDP over the period, with low-income economies growing by around 33 per cent. In the model, reductions in import costs increase productivity thanks to specialization according to comparative advantage, improved access to intermediate inputs, and the diffusion of ideas through imports of intermediate inputs from economies with higher levels of technology. The low- and middle-income groups saw larger reductions in trade costs over the period than the high-income group and, consequently, they grew faster. Moreover,

Figure B.3: Faster income convergence due to trade costs reduction, 1995-2020



Source: Authors' calculations, based on WTO Global Trade Model.

Note: The figure displays the estimated contribution of trade costs reduction to average income convergence by income group between 1995 and 2020. Speed of income convergence is expressed as the difference between the average annualized real GDP per capita growth rate of an income group and the average growth rate in high-income economies between 1995 and 2020. The baseline component is the predicted speed of convergence if trade costs remained at their 1995 level. The trade costs reduction component is the additional speed of convergence due to the observed reduction in trade costs. The income groups are based on the 1995 World Bank classification.

less technologically advanced economies have a higher potential to benefit from the diffusion of ideas facilitated by trade, which also contributes to convergence. For low-income economies, the diffusion of ideas accounted for around two-thirds of the effect of lower trade costs on their income growth. Overall, the analysis shows that the trade costs reductions led to between 20 and 35 per cent faster income convergence of low- and middle-income economies (see Figure B.3).

3. Why have some developing economies gained little from globalization?

Economies in which growth has remained slow or stagnant typically show low trade participation, are heavily dependent on commodity exports, and receive little FDI. As discussed in the previous section, many developing economies have taken advantage of globalization to reinforce the impact of domestic economic reforms on their economic growth. They have done so by reducing importing and exporting costs, and by leveraging access to foreign consumers, products, capital and technology to accelerate structural transformation and diversify their production towards modern sectors. On the other hand, as shown in Section B.1, economies that have lagged behind remain at the margins of global trade and investment flows, typically due to high trade costs, commodity dependence and poorly functioning domestic markets.

(a) Barriers to trade participation hinder economic convergence

There are still important gaps between the trade costs of high-income economies and those of the rest of the world. The rapid expansion of global trade in the 1990s and 2000s was fuelled by declines in transportation, communications and transaction costs, as well as in trade policy barriers. However, this decline in trade costs slowed after 2012, especially in middle- and low-income economies (WTO, 2023c). The WTO Trade Cost Index,⁹ a measure of all the frictions that remain in international trade relative to domestic trade, shows that the remaining gap between trade costs in high-income economies and in low- and middle-income economies remains particularly large in manufacturing and services (see Figure B.4). The group of low- and lower-middle-income economies has manufacturing trade costs 34 per cent higher than those in high-income economies, and the gap reaches 47 per cent in LDCs. There is a similar disparity in the services sector, as it is 50 per cent more difficult to

trade in services with LDCs than with high-income economies.

In Africa and the Middle East, trading with partners within the region is more difficult than trading with partners from other regions. This is in contrast to other regions in the world, where intra-region trade usually incurs lower import and export costs due to closer geographical proximity and shared cultural or institutional similarities. This has been confirmed by estimates of the WTO Trade Cost Index, which suggest that trade costs within regions are 20 to 40 per cent lower compared to trade costs between regions. However, the region of Africa and the Middle East is an exception, with intra-regional trade costs 20 per cent higher than extra-regional trade costs.

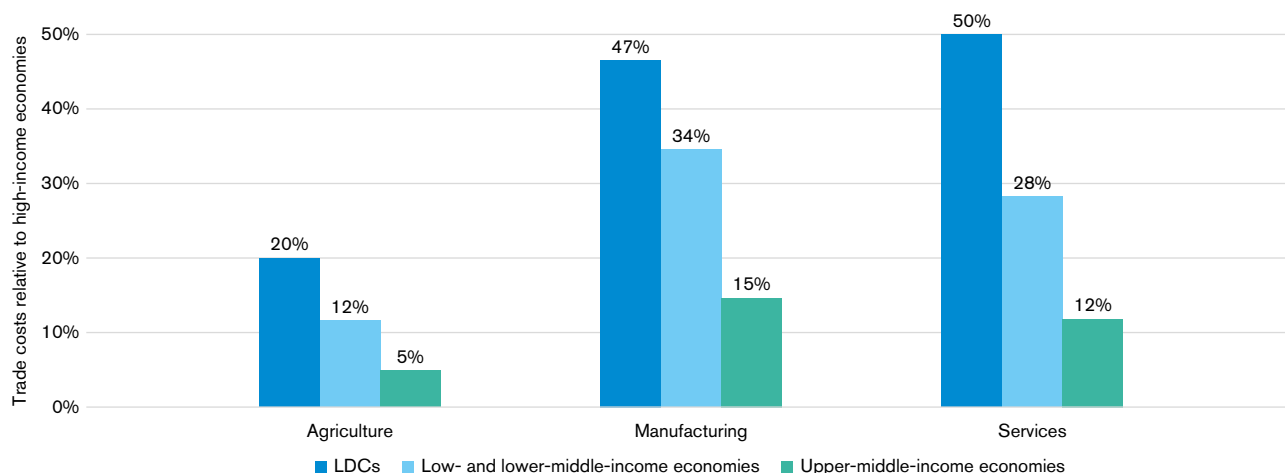
Trade policy barriers and regulatory differences are still an important component of overall trade costs. Despite relatively low levels of applied tariffs and the expansion of regional trade agreements (RTAs), trade policy and regulatory differences are as important as geographical distance in explaining trade costs variation of low- and middle-income economies (Rubínová and Sebti, 2021). This points towards the salience of non-tariff measures in constraining trade growth in developing economies.

(i) Economic development can be hindered by some trade policies faced by developing economies

Developing economies, and especially LDCs, are granted preferential access to many markets. The Generalized System of Preferences (GSP), currently granted by 16 economies, consists of non-reciprocal sets of measures designed by each granting economy, where most schemes contain lower preferential tariffs (including duty-free) for LDCs and developing beneficiaries (UNCTAD, 2023a). An additional eight economies grant duty-free treatment for LDCs, while several high-income economies complement their GSP schemes with region-specific preferences, such as the African Growth and Opportunity Act.¹⁰

However, compliance costs limit the use of LDC preferences. The degree to which LDC exporters make use of preferences varies substantially across sectors (Richter and Verbeet, 2020). Figure B.5 shows the relationship between the average LDC preference margin, that is, the difference between the tariff applied under (the best) LDC preferential treatment and the MFN tariff, and the average share of LDC exports that make use of the preference. The highest preference utilization, above 90 per cent, is in the categories “Coffee, tea, cocoa and spices”, “Clothing”, “Fish and fish products” and “Beverages and tobacco”. Preference utilization

Figure B.4: Higher trade costs in lower-income economies relative to high-income economies, 2020



Source: Authors' calculations, based on the OECD trade in value added (TIVA) database and WTO trade cost index methodology.

Note: The figure illustrates the average trade costs in low- and middle-income economies compared to high-income economies in 2020 by sector. The analysis covers 71 economies, including 34 low- or middle-income economies and five LDCs. The income groups are based on the 2020 World Bank classification. The LDC group is based on the United Nations (UN) classification.

is positively correlated with the size of the preference margin, suggesting that exporters only use preferences when the benefit (i.e., the preference margin) outweighs the costs of preference utilization. Factors influencing this trade-off include the stringency of rules of origin and bureaucratic requirements for importers, such as expensive audited paperwork per shipment, as well as the size of exports for exporters (Bekkers and Cariola, 2024).

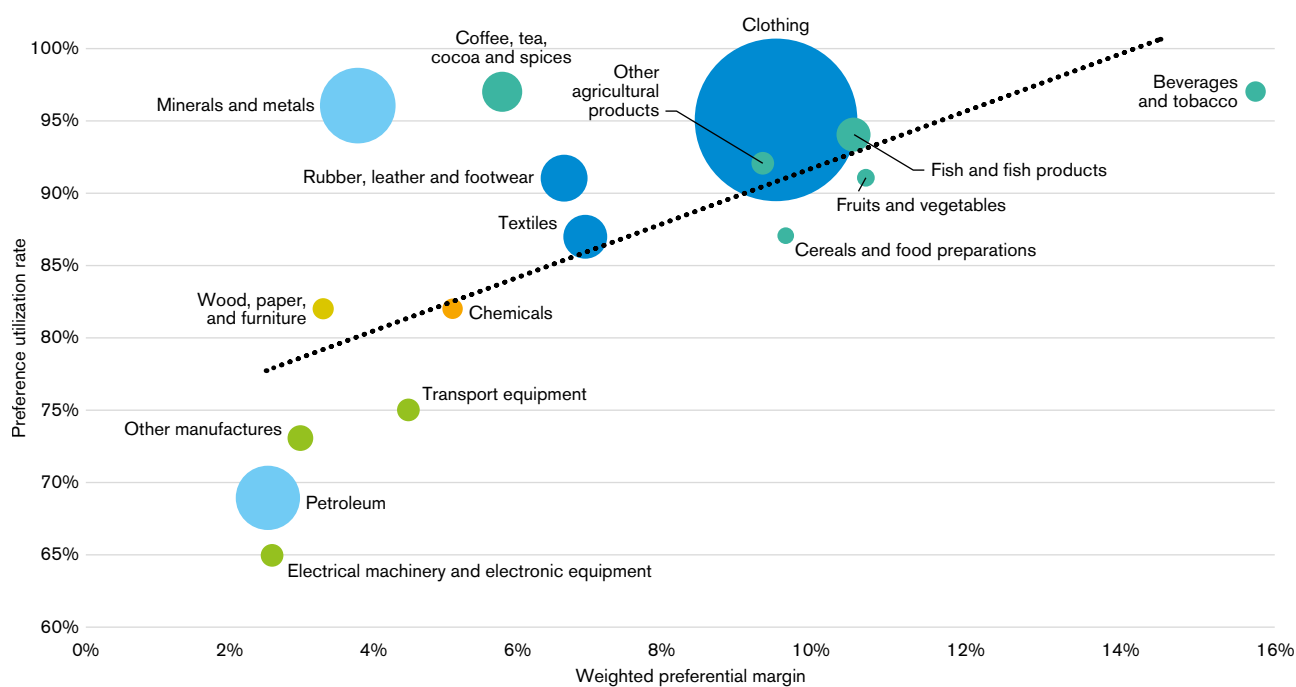
Simplifying rules of origin leads to higher preference utilization. Rules of origin are the criteria used to determine the provenance of a product and thus its eligibility for preferential treatment. Evidence from the Dominican Republic-Central America Free Trade Agreement indicates that simple rules that require exported products to have a different tariff classification from imported inputs lead to higher preference utilization due to lower compliance costs. Conversely, more complex rules, requiring compliance with technical requirements and prohibiting the use of certain imported inputs alongside tariff classification changes, are associated with lower preference utilization (Lee and Cunha, 2024). Evidence from the simplification of rules of the European Union's GSP also shows a positive impact on preference utilization (Tanaka, 2021; Tanaka and Fukunishi, 2022).

Standards may have positive impact on exports from developing economies, but the impact depends on the cost of compliance. Regulatory measures such as technical barriers to trade (TBT), and sanitary and phytosanitary (SPS) measures have proliferated over the past three decades. These

standards affect trade through two opposing forces. On the one hand, they typically raise producer costs by requiring investment in upgrading production techniques, packaging, labelling and other compliance expenses. On the other hand, regulatory policies such as TBT and SPS measures can redress information asymmetries between consumers and sellers and thus serve as catalysts for trade participation for producers from developing economies (Maertens and Swinnen, 2009; WTO, 2012). Moreover, quality and safety standards can increase product values, incentivize technology transfers and affect the distribution of profits along the value chain, potentially to the benefit of small firms (Swinnen, 2016). The overall impact on trade volumes therefore depends on the balance between the two forces, which varies across consumers (according to their preferences) and producers (according to their ability to comply).

Producers in poor economies may face high costs of compliance with standards. The impact of standards depends on the ways in which these policies are implemented. For example, inspections at borders and other formalities to assess conformity with regulations can increase trade costs and distort trade to various degrees. Compliance with standards, or even the demonstration of compliance, may be particularly burdensome for producers in poor and small economies, because investments in compliance, as well as many conformity assessment-related costs, do not vary with quantities of sales, and therefore represent much higher obstacles to trade for small exporters and for those with limited access to financing.

Figure B.5: Positive correlation between LDCs' preference utilization and preference margin size, 2022



Source: Authors' calculations, based on WTO data on preferential tariffs and related trade flows.

Note: The figure shows the correlation between the weighted preferential margin and preference utilization rate in 2022. The analysis covers the imports from LDCs to the European Union, Iceland, Norway and the United States. The size of each circle corresponds to LDCs' total exports of the product category.

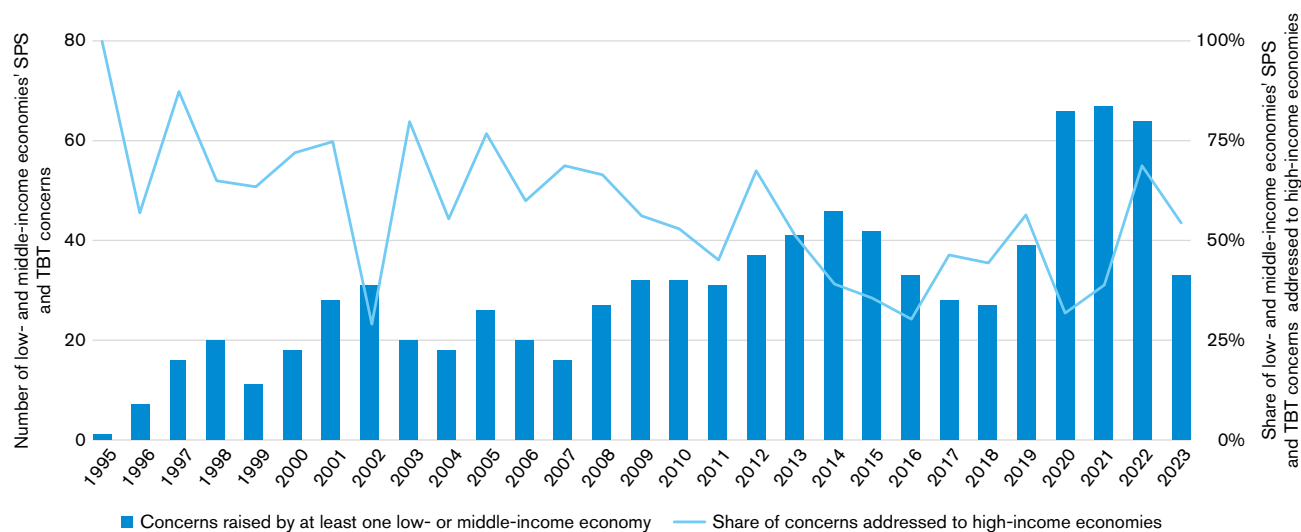
The number of concerns raised by developing economies with regard to regulatory measures has increased. TBT and SPS measures that may excessively distort trade can be gauged from the specific trade concerns raised by WTO members about other members' measures.¹¹ The number of concerns raised or sponsored by low- and middle-income economies has increased over the years (see Figure B.6). Until 2016, this increase was driven by a rise in concerns about other low- or middle-income economies' measures, but since then the proportion addressed to high-income economies appears to have risen again. Concerns increased markedly in the three years after the outbreak of the COVID-19 pandemic, returning to pre-pandemic levels only in 2023.

Subsidies can suppress international prices and contribute to the inefficient and unsustainable allocation of scarce resources. Subsidies can distort international trade by boosting the competitiveness of domestic producers relative to their competitors abroad, and these distortions can manifest as an erosion of market access commitments in the domestic economy or as an increase in exports that displaces other producers in foreign markets. Subsidies can therefore harm net exporters of

subsidized products while benefiting net importers. The overall impact on low-income economies and LDCs may vary, nevertheless, depending on their status as net importers or exporters. Modelling studies find that both import barriers and producer subsidies in the agriculture market reduce global economic welfare and agricultural trade, while also contributing to global inequality and poverty (Anderson, 2013). Import market access distortions, such as tariffs and regulatory measures, tend to have a greater market-distorting effect than domestic support, accounting for less than one-tenth of the welfare effects (Anderson, Martin and Valenzuela, 2006).

The impact of industrial subsidies is potentially more complex than that of agriculture subsidies. Industrial sectors typically make up a part of long international supply chains, and therefore subsidies to producers in one industry can have pronounced effects on foreign producers not only in the same industry, but also in upstream sectors, through increased demand for inputs, and in downstream sectors, through cheaper costs of intermediate inputs supplied by the subsidized industry. Moreover, some subsidies, such as those for green technologies, can have positive spill-over effects and benefit other economies.

Figure B.6: Growing number of concerns about SPS and TBT measures raised by low- and middle-income members, 1995-2023



Source: Authors' calculations, based on WTO data on SPS and TBT trade concerns.

Note: The figure displays the evolution of the number and share of trade concerns raised by low- and middle-income members in the SPS and TBT committees over the period 1995-2023. The income groups are based on the 1995 World Bank classification.

Agriculture producer subsidies used to be concentrated in high-income economies, but in the past decade large middle-income economies have accounted for almost half of global agriculture subsidies. There are important gaps in the available knowledge about subsidy practices; most of the data that are available for a broad scope of economies and sectors refer only to counts of measures and have important shortcomings (IMF et al., 2022). Agriculture is one exception where systematic evidence on quantities of subsidies exists, having been collected by the Organisation for Economic Co-operation and Development (OECD). At their peak in 1999, subsidies to agriculture producers in high-income economies reached 8.4 per cent of global agriculture production value. These subsidies declined rapidly in the 15 years following, and they have remained at between 3.6 and 4.2 per cent of global agriculture production value since 2014.¹² Large emerging economies, on the other hand, saw rapid increase in agriculture production subsidies between 1999 and 2008, which have remained at 3.0 to 3.8 per cent of global agriculture production value since then.

(ii) Some trade policies in developing economies can hold back their economic development

Import tariffs remain relatively high in low-income economies and LDCs, while services trade barriers are relatively high in the group of lower-middle-income economies. As discussed

above, many of the channels through which openness fosters growth relate to imports. Higher tariffs act from this perspective as a barrier to growth. In fact, applied tariffs¹³ have remained relatively high in low-income economies and LDCs over the past decade, at around 8 per cent on average, compared to 5 per cent in middle-income economies and 3 per cent in high-income economies. If we consider the group of diverging economies (as defined in section B.1), they apply higher average tariffs compared to other economies in their income group, and this difference has only increased in the past decade. Barriers to services imports, on the other hand, show, on average, little difference between developing and high-income economies. An exception is the lower-middle-income group, in which services trade restrictions are, on average, 17 per cent higher than in high-income economies.¹⁴

While GSP schemes may offer developing economies access to consumers in high-income economies, reciprocal trade agreements still offer significant potential to boost trade. Economic integration with nearby economies provides opportunities to increase market size, and thus to achieve economies of scale and attract imports and FDI. For Africa, the African Continental Free Trade Area could be an important step forward in this regard. Integration with high-income economies has the additional potential benefit of stimulating technology transfers by facilitating GVC participation and providing access to sophisticated consumers

with strong purchasing power (as discussed in Section B.2). However, while non-reciprocal trade arrangements, such as GSP schemes, may provide the access to consumers in high-income economies, they are subject to regular government reviews and can be easily withdrawn, which generates high policy uncertainty and thereby hinders long-term investment into trade relationships (Handley and Limão, 2022; Tanaka, 2022).

Low-income economies and LDCs have signed fewer RTAs with high-income economies. They also tend to have fewer RTA partners than middle-income economies (see Figure B.7). Moreover, most of this disparity stems from the lack of RTA partners that are high-income economies. This is particularly striking for LDCs in South Asia and sub-Saharan Africa, which may, at least partly, be a reflection of the remoteness of these regions from global centres of economic activity.

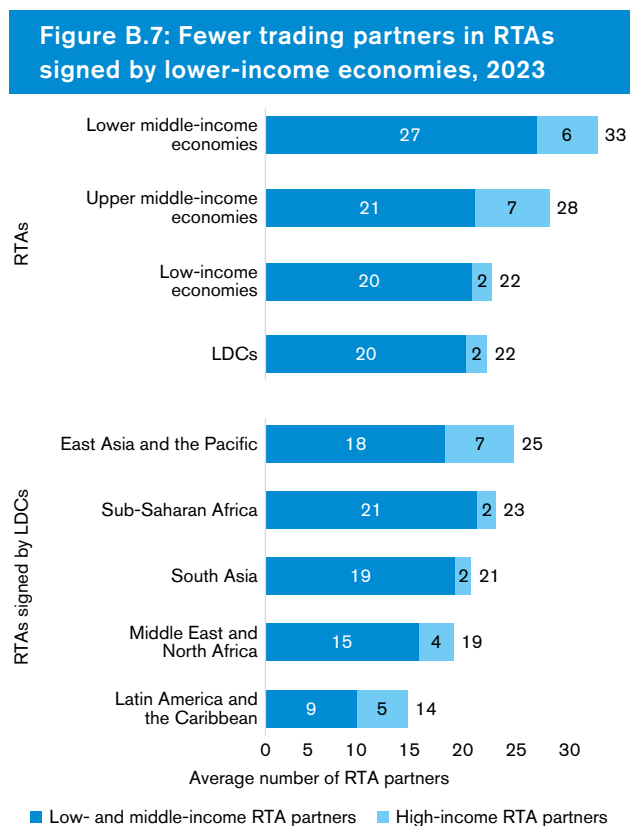
Low- and lower-middle income economies have made the least progress in implementing measures and technologies that facilitate international trade. Since the conclusion of the

WTO Trade Facilitation Agreement (TFA), there has been substantial progress in the implementation of measures and technologies that facilitate international trade (see Figure B.8). These include measures covered by the TFA, such as transparency, institutional arrangement and cooperation, and formalities and transit facilitation, as well as technology adoption such as paperless trade measures that make the communication between government agencies and traders, and among government agencies, easier (UN-ESCAP, 2023). However, progress has been relatively slow in low- and lower-middle income economies.

(iii) Under-developed infrastructure and geographical challenges impede sustained economic development

Physical and digital infrastructure and the distribution sector play an important role in the ability of firms to participate in and benefit from trade. Size can prove an obstacle for small developing-economy firms wishing to achieve the necessary economies of scale to be internationally competitive and to pay the fixed costs associated with exporting or importing. But even in larger economies that could potentially achieve enough scale, high internal trade costs coupled with poverty lead to small and segmented markets, distort production and reduce the potential gains from trade-opening (Coşar and Fajgelbaum, 2016; Leone, Macchiavello and Reed, 2021). For instance, empirical evidence shows that the marginal costs associated with distances in Ethiopia and Nigeria are four to five times higher than in the United States, and this difference is only partly explained by the poor quality of transport infrastructure (Atkin and Donaldson, 2015). This points to the importance of complementing physical infrastructure with competitive infrastructure services, such as electricity, transport and telecommunications. Moreover, an uncompetitive distribution sector can also drive a wedge between local producers and foreign customers. For instance, cashew farmers in Mozambique saw little benefit when the government removed export restrictions on cashews, as trade intermediaries that connect farmers to the export markets retained most of the ensuing price increase (McMillan et al., 2003).

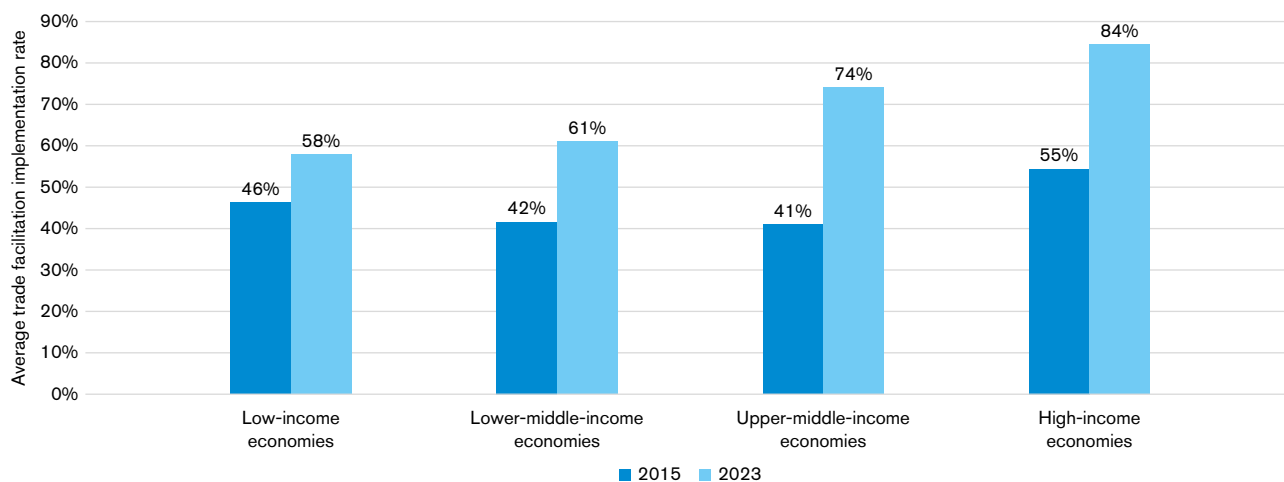
There is a large gap between low-income and high-income economies in terms of the liberalization of electricity and telecommunication services, data from the International Monetary Fund’s (IMF) Structural Reform Database show. This gap widened in the 2010s, suggesting limited improvement in the provision of these infrastructure services, which are essential not



Source: Authors’ calculations, based on WTO data on notified RTAs.

Note: The figure shows the average number of RTA partners by income group in 2023. The analysis cover 120 low- and middle-income economies. The income groups are based on the 2023 World Bank classification.

Figure B.8: Limited trade facilitation implementation in lower-income economies, 2015 and 2023



Source: Authors' calculations, based on UN-ESCAP survey data on trade facilitation.

Note: The figure shows the average rate of trade facilitation implementation in 2015 and in 2023 by income group. The income groups are based on the 2023 World Bank classification.

only for overall productivity improvements, but also for connecting sellers with buyers and accessing information through digital tools, thereby reducing the need for middlemen and facilitating trade participation. Moreover, while information and communications technology (ICT) penetration (measured by mobile and fixed-line telephone and internet subscriptions) converged in most of the world between 2000 and 2018, sub-Saharan Africa and South Asia were two regions where it has diverged (Saba and David, 2020).

Lack of financial infrastructure and of interoperable regulatory systems hinders cross-border payments. Cross-border payment systems are crucial for the smooth operation of cross-border transactions. The lack of financial and digital infrastructure, combined with limited competition among financial service providers, increases the costs of international payments and thus the transaction costs associated with international trade. These shortcomings also increase the costs of transferring remittances, i.e., the money that migrants send to their home countries (see Box B.3).

Landlocked developing economies face particularly high trade costs due to poor infrastructure connectivity and regulatory hurdles associated with crossing multiple borders. Estimates based on the WTO Trade Cost Index methodology show that export and import costs in agriculture and manufactured products in landlocked developing economies are around 30 per cent higher compared to coastal developing economies (WTO, 2021a). Transit delays, infrastructure bottlenecks,

missing links in highway networks and regulatory hurdles have a considerable impact on trade performance, especially in Africa (Djankov, Freund and Pham, 2010; Freund and Rocha, 2011; Hallaert, Cepeda and Kang, 2011). With 16 landlocked economies accounting for about 30 per cent of Africa's total population, solving issues associated with trade facilitation and transit corridors linking landlocked economies to seaports is essential for the continent's trade integration. Services trade policies that enhance access to infrastructure services, particularly in telecommunications and air transport services, are also important to enhance connectivity of landlocked nations (Borchert et al., 2017).

Small island developing states incur high transportation costs. Geographical position off the main trading routes and small scale of trade lead to high shipping costs for traders in remote small island economies. According to the latest estimates from UNCTAD, small island developing states pay 60 per cent more than other developing economies for transporting their exports.¹⁵

(iv) Weak rule of law and contract enforcement hamper economic development

International trade relationships are particularly sensitive to weak contract enforcement. A defining feature of many developing economies is that they have weak institutions, with weak rule of law perhaps being the most obvious manifestation of this (Atkin et al., 2022). While, of course, institutions matter for domestic transactions, international transactions typically incur larger monetary and time costs between

Box B.3: The role of remittances for development

Remittances – funds transferred by migrants to their home countries – are vital for development. In 2023, 76 per cent of remittance flows, totalling US\$ 656 billion, went to low- and middle-income economies (World Bank, 2024c). In recent years, these financial flows to developing economies have exceeded the combined sum of FDI and official development assistance, and this gap is growing wider. Remittance flows and cross-border payments have shown resilience and steady growth, contrasting with the cyclical adjustments of private capital flows. Due to increasing migration pressures, remittances are expected to grow in the coming years.

With 200 million people sending money and 800 million family members receiving these funds, remittances provide essential support for household consumption, including food, housing, education and healthcare. They also provide capital for small business development, spurring entrepreneurship and new business ventures, offering opportunities for diaspora investments in home countries and reducing information asymmetries regarding new trade and investment opportunities in both the country of origin and the country of destination. These financial inflows can also contribute to national economic stability by boosting foreign exchange reserves and financing public infrastructure projects.

While increased competition, improved digital infrastructure, use of digitalized financial channels, and enhanced financial literacy have contributed to lowering the cost of remittances, to a world average of about 6.2 per cent in 2023, this cost reduction has plateaued in recent years (World Bank, 2024b). Regionally, South Asia has the lowest average cost of remittances, at 5.2 per cent, while sub-Saharan Africa has the highest, at 7.7 per cent. Cash remains the primary method for sending remittances, predominantly through the costliest channels, namely banks, post offices and money transfer operators. Factors such as high foreign currency exchange fees, costly agent management, limited competition among service providers, small remittance corridors, and a lack of interoperable regulatory frameworks and payment systems all contribute to high remittance costs. In some regions, such as sub-Saharan Africa, informal channels are still used for remittances, and this leads to higher costs. In many developing economies, particularly in rural areas, poor digital and financial inclusion infrastructure hinders migrants from accessing and utilizing cost-effective digital alternatives to send remittances.

United Nations Sustainable Development Goal target 10.c (“Reduce inequality within and among countries”) aims to reduce migrant remittance transaction costs to less than 3 per cent, and to eliminate remittance corridors with costs exceeding 5 per cent by 2030. Achieving a 3 per cent cost target would result in an additional US\$ 32 billion in annual remittances (Kpodar and Imam, 2024). Reducing the cost of remittance services could be achieved through various strategies, such as by enabling competition through clear and proportionate regulations that accommodate diverse financial services providers, by developing national money payment systems, by expanding digital public infrastructure, or by ensuring regulatory convergence and cross-border payment interoperability. Enhancing financial and digital literacy could also contribute to reducing information asymmetries and to empowering migrants to make informed financial decisions and use cost-effective digital alternatives.

production and delivery, and require contracting across jurisdictions. This increases the risks associated with not delivering or not paying when trading with partners in economies with weak rule of law. For instance, a study of cross-border transactions of a US-based poultry exporter found that only firms in importing economies characterized by weak rule of law are required to pay the exporter cash in advance (Antràs and Foley, 2015). For cash-constrained importers in developing economies, these cross-border payment terms represent a substantial barrier to international trade (Ahn, Amity, and Weinstein, 2011).

Trade finance can help to mitigate the risks associated with weak contract enforcement but firms in many developing economies have limited access. Many studies have documented the ways in which firms try to overcome contract enforcement risks when sourcing from developing economies, such as establishing long-term relationships with suppliers that help to incentivise behaviour which might otherwise be difficult to contract upon or incorporating suppliers in their ownership structure (Hansman et al., 2020; Boudreau, Cajal-Grossi and Macchiavello, 2023). However, these strategies require investment, which

Box B.4: Availability of trade finance in West Africa and in the Mekong region

The availability and cost of trade finance vary greatly across economies and levels of development. According to two recent joint reports by the WTO and International Finance Corporation (IFC), the share of trade supported by trade finance stood at 15 per cent in Senegal and 20 per cent in Nigeria and in Viet Nam, while it was only 3 per cent in Cambodia and in Lao PDR (IFC and WTO, 2022, 2023). In contrast, the average share of trade supported by trade finance in the African continent – including emerging markets such as Egypt, Morocco and South Africa, hosting some of the continent's largest banks – was 40 per cent. According to the Bank for International Settlements (2014) and WTO (2016), the share of trade supported by trade finance in developed economies appears to be equal or superior to 60 per cent.

The availability of trade finance in developing economies can be gauged from the rate of rejections by banks of trade finance requests from exporters and importers. While statistics on rejection rates are not available for all economies, existing surveys indicate that rejection rates by banks for trade finance applications are high in low-income regions. For instance, the rejection rate in West Africa is 25 per cent of the value of requests, against 12 per cent for the African continent (AfDB and Afreximbank, 2020; IFC and WTO, 2023).

A part of these rejections can be justified on grounds of lack a creditworthiness of firms, a motive that can also be found in developed economies; but another part of these rejections can be attributed to supply and demand factors more specific to developing economies. These include poorly documented applications, lacking or insufficient correspondent banking relations and lines of credit, insufficient access to foreign currency and lack of scale for local banks, preventing them from financing higher value trade transactions, and shortages of low-cost funding (IFC and WTO, 2022, 2023). Moreover, while traded merchandise is used as collateral for trade finance, in low-income economies, further collateral is often sought by banks due to doubts that legal enforcement mechanisms would allow them to take ownership of the merchandise in case of default. Thus, it is the lack of collateral and high perception of the applicant risk that top the list of banks' motives for rejections of trade finance applications in West Africa.

Given that trade finance is normally short-term, low-risk finance, it is available at low prices in developed economies. In contrast, trade finance prices can significantly exceed global emerging market benchmarks in low-income economies. Costs can be exacerbated by poor supplies of foreign exchange in a specific market, as the majority of trade finance transactions are denominated in foreign currency, notably in US dollars and euros.

A counterfactual analysis suggests that raising the share of trade supported by trade finance from 25 per cent to 40 per cent in both the West African and Mekong regions, and reducing the cost of trade finance to advanced emerging economies' benchmarks, would increase annual trade flows in those regions by 8 per cent on average (Auboin, Bekkers and de Quarti, 2023). In both regions, intra-regional trade would be boosted significantly, supporting locally-owned economic sectors and supply chains.

makes them viable only for large volumes of transactions, meaning that they are often not possible options for smaller traders. Trade finance, where available, can help to mitigate the transactional and financial risks related to the time gap between production and payment; however, firms in many developing economies have limited access to trade finance instruments (see Box B.4).

Weak rule of law possibly magnifies distortions from tariff policy, weighing especially heavy on smaller traders. Inconsistent tariff policy application by customs officials, who regularly hold up importers by demanding additional fees to clear transactions, has been found to create uncertainty that can act as an additional trade barrier (Sequeira and Djankov, 2014; Atkin et al., 2022). Empirical evidence further

shows that some firms in low-income economies are willing to double their transport costs to avoid bribery risks, that tariff revenue losses due to tariff evasion are highly concentrated among a few firms with the largest shipments, and that two-fifths of importers report in a way that increases their tariff liability (Sequeira and Djankov, 2014; Anne et al., 2023). This indicates that customs reporting can represent a large burden for smaller importers. Electronic customs declarations, auditing and addressing incentive structures within customs departments could reduce the administrative burden, as well as tariff evasion and underreporting of imports and exports (Finan, Olken and Pande, 2017; Carballo et al., 2022; Chalendar et al., 2023; Laajaj, Eslava and Kinda, 2023).

The enforcement of intellectual property (IP) rights can be particularly important to foster imports of innovative products, and could also stimulate export growth, especially in large and middle-income economies. Empirical evidence shows that the implementation of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) can considerably increase trade in innovative products by developing economies, including both increasing imports of these products from the most innovative economies and increasing exports of some innovative products such as biopharmaceuticals and chemicals (Ivus, 2010; Delgado and Kyle, 2022). The positive impact on exports can be driven by more patent applications in the local market by foreign companies, incoming FDI and increased intra-firm trade in high-technology intermediates (Maskus and Yang, 2018). However, this impact has mostly been found in large and middle-income economies, with little evidence from small low-income economies that lack the absorptive capacity to incorporate high-technology inputs in their production and operationalize technologies developed in high-income markets (Branstetter and Maskus, 2022).

(b) Specialization in primary commodities production without sustained and inclusive gains impedes economic convergence

Economies that depend on a single commodity as their main source of exports often struggle to achieve sustained growth. Although some resource-rich economies have achieved rapid convergence through commodity exports, many others have lagged behind. As discussed in Section B.1, dependency on primary commodity exports (whether extractive or agricultural commodities) is a common characteristic of economies that have experienced slow growth despite relatively high trade participation. In addition, agriculture commodity-dependent exporters, some of which are small and vulnerable economies, tend to have both low trade participation and slow growth.

Commodity price volatility and a lack of diversification can be obstacles to economic growth in resource-rich economies. Commodity dependence can be detrimental to growth and convergence, as it can expose an economy to commodity price volatility. While an increase in an export commodity price can have a positive impact on income per capita, there is evidence that volatility has a negative impact on long-term growth (WTO, 2003; IMF, 2011; UNCTAD, 2023b). The impact of commodity exports on other sectors of the economy can also lead to low levels of diversification and slow

down structural transformation that is necessary for sustained growth.

Commodity dependence may increase inequality in an economy, and consequently hinder economic growth. There is a negative relationship between inequality and growth, and the impeding effects are particularly pronounced at low-income levels (Amini and Bianco, 2016; Shen and Zhao, 2023). Extractive commodities are typically capital-intensive and limit the creation of employment for the broader population. Moreover, revenues from these commodities tend to benefit only a small segment of the population. In such an environment, even a positive price shock would hardly translate into broad-based and growth-sustaining higher demand. As a result, low-income commodity-dependent economies face significant challenges in building a sustained middle class needed to achieve broad-based economic growth and sustained poverty reduction. A robust middle class – typically characterized by a relatively high material standard of living – increases domestic consumer demand for goods and services, creating a larger and more stable market (Goldberg and Reed, 2023b). This demand can encourage the growth of diverse industries beyond extractive commodities, fostering economic diversification. The middle class can further contribute to economic stability through more consistent consumption patterns and investment in housing, education, and healthcare.

(i) Commodity price volatility hampers economic development

Commodity price volatility hinders investment and innovation. Volatility is often considered to be one of the reasons behind the “resource curse” – when an economy rich in valuable natural resources, such as minerals, oil, gas and fertile land, nevertheless underperforms economically (Van Der Ploeg and Poelhekke, 2009). The direct positive effect of natural resources on growth and long-term development is swamped by the indirect negative effect of volatility, which leads to significant income uncertainty. This negative effect occurs mainly because of a lack of investment into physical and human capital, which stifles productivity growth and innovation and, ultimately, the capacity to diversify into modern sectors. Moreover, price volatility in agricultural commodities can exacerbate poverty, as food prices disproportionately impact poorer rather than richer economies, and the poor rather than the rich within those economies. This is because agricultural revenues are the main sources of income among the poorest populations, and expenditure on food

represents a relatively large share of the budget in the poorest households.

The pro-cyclical nature of commodity price fluctuations can further undermine macroeconomic stability. The prices of commodities that are widely used in industrial processes, such as copper or oil, fluctuate according to the business cycle. During economic downturns, prices decrease due to reduced global demand. This aggravates the economic conditions of economies that rely heavily on revenues from exporting these commodities. One commodity that differs in this respect is gold, the price of which typically increases during global crises and periods of economic uncertainty, as investors often turn to gold as a safe investment asset (Chiang, 2022; Sharma, 2023). The peculiar characteristics of this commodity may explain the mixed performance of gold-exporting economies.¹⁶

Governments in resource-rich economies often struggle to manage the volatile revenue from resource exports. In the absence of appropriate fiscal management, even rising prices of export commodities can be detrimental to an economy. In fact, sudden increases in natural resource wealth can lead policymakers to escalate public spending in a way that can become unsustainable once resource revenues decline (Marioli and Vegh, 2023). Large revenues from oil exports can also dampen commitments to long-term investments and growth strategies (Venables, 2016).

Financial market development is essential to mitigate the negative consequences of commodity price volatility. In economies with well-developed financial sectors, the resource curse tends to be less pronounced (Van Der Ploeg and Poelhekke, 2009). A more financialized commodity market dampens the effect of price volatility on real exchange rate fluctuations and hence improves macroeconomic stability. In addition, access to financial instruments or technologies can help commodity producers to insure their revenues against price fluctuations and thus reduce their income uncertainty. Export taxes that soften the impact of rapidly rising world prices in the domestic market are another instrument used by governments to insulate their economies from price volatility and raise revenues, which can benefit domestic consumers. Nevertheless, many natural resource economists would argue that this is a second-best way of addressing income instability problems, to be used only where the first-best option of developing efficient financial markets is not attainable (WTO, 2010).

Enhancing the resilience of public finances and adopting a long-term perspective is crucial

to leverage commodity exports sustainably in the development process. The resilience of public finances in commodity-dependent developing economies can be enhanced by broadening and diversifying the tax base, adopting forward-looking budgetary practices, and implementing fiscal rules. The commonly held view is that revenues should not be spent immediately during periods of high commodity prices, but should be put into liquidity funds to accumulate savings that would help to protect exporters and the economy during periods of low prices. For economies rich in depletable resources, investing revenues in commodity-based sovereign wealth funds can help to spread the benefits across generations and support long-lasting sustainable growth. Chile, for example, combined fiscal rules and sovereign wealth funds to manage external shocks, particularly those related to copper price volatility. It has successfully reduced GDP growth volatility since 1990, maintaining relatively stable growth even after the 2008-09 financial crisis (Céspedes, Parrado and Velasco, 2014; Solimano and Guajardo, 2018). However, successful implementation of these measures hinges on achieving social consensus, which can be challenging in economies with low institutional capacity.

(ii) Lack of diversification can impede economic growth

Over-reliance on exports of a single commodity can have an indirect negative impact on other sectors of the economy and inhibit diversification. This phenomenon is commonly known as the Dutch Disease. It describes the negative impacts of a rapid increase in revenues from natural resource exports, such as oil, gas or minerals, on other sectors of the economy, particularly manufacturing and agriculture, and is named after the experience of the Netherlands following the discovery of natural gas reserves in the 1960s. Similarly, in the context of low-income economies and LDCs heavily reliant on one specific sector, the Dutch Disease can also manifest when a sudden increase in commodity export revenues, including agricultural products, leads to appreciation of the exchange rate. This, in turn, makes production and exports of other products less competitive on the global market, hindering diversification efforts and leading to over-reliance on a single sector (WTO, 2010). In addition, the influx of revenue can lead to neglect of other sectors crucial for long-term economic development and employment generation, such as manufacturing and services.

Furthermore, the market power of large global commodity buyers can hinder diversification

into higher-quality products by limiting the gains from trade for small producers. About 80 per cent of global farms are owned by smallholders. Large intermediaries connect these small farmers to global crop markets and thus reduce their high export barriers. Nevertheless, a rising concentration among intermediaries, such as multinational agribusinesses, also leads to relatively lower gains from exports for farmers. Empirical evidence from three low-income economies suggests that when global prices increase, intermediaries retain most of the higher gains with less than a third of those gains benefiting farmers directly (Dhingra and Tenreyro, 2020). As a result, farmers lose out in relative terms, despite gaining in absolute terms, and have fewer incentives to invest in better technology or to diversify into high-quality, high-yield crops.

Finally, tariff escalation in export markets can limit the ability of developing economies to diversify into processed, higher value-added products. Tariff escalation refers to a situation in which tariffs are lower for primary commodities and increase as products undergo processing. This reduces the incentive to industrialize in commodity-exporting economies, and it acts as a disincentive to diversify production (WTO, 2010). Based on most recent applied tariffs data, the tariff schedules of large agriculture importers still show signs of tariff escalation. Of the top ten agricultural importers, seven impose higher average tariffs on minimally processed or processed food products than on raw products.¹⁷ On the other hand, none of these economies' tariffs increase consistently with the degree of processing.

In the long term, diversification away from the natural resources sector is essential to support economic development. Diversifying away from the natural resources sector can help to mitigate the risks associated with dependence on a single sector and can enhance overall economic resilience. Such broader diversification becomes even more necessary if resources are depletable. Moreover, where commodity extraction and production are highly capital-intensive, diversification can deliver few positive spillovers in terms of employment, and little potential for aggregate labour productivity growth. Diversification can address this issue by fostering the development of other productive sectors, including labour-intensive manufacturing and services.

There is growing evidence of the role of governments in helping economies to diversify towards modern sectors. Learning-by-doing spillovers that increase an industry's competitiveness as it grows are frequently used to rationalize the use

of industrial policies (Harrison et al., 2010; Choi and Levchenko, 2021). Another prominent issue is the presence of cost-discovery externalities whereby the experiences of firms pioneering a new industry or a new technology generate valuable public information. Without public incentives, no producer can enter such activities, and this can delay the adoption of new technologies or diversification into new sectors (Hausmann and Rodrik, 2003; Harrison et al., 2010). Similarly, coordination failures can inhibit growth in industries relying on the development of a complementary network of firms, or those relying on innovative activities (Rodrik, 2007; WTO, 2020b).

Governments use a wide array of inward- and outward-oriented policies to steer the economy towards certain sectors and activities. Industrial policies range from subsidies, tax credits, trade policy measures and infrastructure projects to education reform. A key feature of contemporary industrial policy is addressing the information asymmetry between the private and public spheres, and ensuring that policies are designed to be compatible with private sector incentives relating to profitability and competitiveness, which require strong state capacity. In practice, the role of industrial policies in combatting market failures and redirecting economic activities is inherently difficult to assess, and the evidence remains mixed (Juhász, Lane and Rodrik, 2023).

Export promotion can help domestic firms to expand into new products and markets. Diversifying from commodity exports into more complex goods represents a challenge for producers in developing economies because information frictions are more severe in products whose quality and characteristics can differ widely across producers. Reducing these information frictions between foreign buyers and domestic producers, and helping the latter to better understand foreign consumer demand and regulations through export promotion programmes, can contribute to diversification into more complex products and higher value-added activities (Volpe Martincus and Carballo, 2008). Digital connectivity and access to the internet play a crucial role in these efforts. Analysis based on 60 developing economies found that digital connectivity through submarine cables increased export complexity, especially in sub-Saharan Africa (Cariolle and da Piedade, 2023).

Export restrictions appear to be an ineffective diversification policy. For fiscally constrained governments in economies that are important global suppliers of a raw material, export restrictions on the raw material can appear to be an attractive policy to redirect the domestic economy towards processed, higher value-added products. Economic theory predicts that

the imposition of an export tax will lower the domestic price of the taxed resource compared to global prices. Thus, domestic downstream producers can access the targeted resource at a lower price, effectively reducing their cost of production. Rigorous empirical evaluation of the effects of export restrictions on downstream sectors is scarce, but case studies of mineral export restrictions in several African economies suggest that they are not an effective tool to promote industrial upgrading (Fliess, Idsardi and Rossouw, 2017). The evolution of exports and revealed comparative advantage in downstream sectors shows little correlation with the presence of export restrictions, and is accompanied by negative consequences for the comparative advantages of targeted primary industries.

Successful industrial policies tend to hinge on the complementarity of various domestic policies. Among the factors influencing the feasibility of domestic value addition are the capacity of downstream sectors, or the incentives to increase this capacity over time (Warwick, 2013; Juhász and Steinwender, 2023). In the case of poor but resource-rich economies, a lack of skills, unstable power supplies and insufficient levels of transport infrastructure can create obstacles to the development of local processing capacity, while political instability and uncertainty about the business environment can hamper international investment (Mobbs, 2011; Ouédraogo, Ouédraogo and Lompo, 2020). Overall, implementing market reforms and policies that facilitate the movement of workers and capital between firms and sectors, improve the business environment, and help to attract foreign investment and technology, can help to develop a more diversified economy and can maximize the gains from trade participation, as discussed in the next section.

(c) Different domestic barriers can hinder the maximization of the gains from trade

Domestic institutions and policies that reduce economic efficiency and slow structural transformation also reduce the potential of trade to accelerate economic growth. Capital and labour market frictions that hamper an efficient allocation of resources can slow the economy's adjustment to trade and reduce the gains from trade. Domestic policies that improve the business climate, infrastructure quality, the skills of the workforce and the competitiveness of local firms can increase domestic investment and productivity. The benefits can be amplified in an open economy in which these reforms also encourage FDI and maximize the gains MNEs can bring in terms of technology diffusion, economic upgrading and access to global markets.

(i) Poorly functioning capital, labour and land markets impede adjustment to trade openness

Poorly functioning capital, labour and land markets slow economic adjustment and structural transformation. Besides trade frictions that make commerce with foreign buyers and suppliers more difficult, an economy's ability to take advantage of trade also depends on its ability to adjust. If capital and workers cannot easily move between firms, sectors and regions, then the economy cannot adjust to trade – import-competing firms cannot shrink, while exporting firms cannot grow. The economy's adjustment to lower trade costs is therefore constricted and the growth of imports and exports dampened.

Capital frictions are a prevalent issue in developing economies, and prevent the efficient allocation of investment among firms. While low-income economies reached similar levels of domestic capital market liberalization to upper-middle-income economies, they still lagged behind high-income economies (Djankov, McLiesh and Shleifer, 2007; IMF, 2019). This type of obstacle can have important industry and aggregate implications for how firms and economies respond to trade shocks. When there are significant obstacles involved in downsizing and closing down firms, import-competition shocks can lead to temporary aggregate productivity losses (Lanteri, Medina and Tan, 2023). On the flip side, capital stranded in import-competing firms limits the ability of exporting firms to expand. Hence, reducing capital frictions would improve the ability of firms in developing economies to adapt to new market conditions and help them better realize the gains from trade liberalization. Underdeveloped financial markets can also prevent firms from selling to and sourcing from foreign markets. Importing and exporting requires paying substantial fixed costs up front, and to fund these fixed costs, firms often rely on external financing (Das, Roberts and Tybout, 2007; Manova, 2013; Foley and Manova, 2015). Credit constraints can therefore limit the ability of otherwise competitive firms to expand into new markets.

Migration frictions and skills mismatches can significantly hinder labour mobility in developing economies, slowing economic adjustment to trade. While formal labour market institutions are not a major obstacle to labour mobility in most developing economies, empirical studies from large emerging economies point to substantial migration obstacles that prevent workers from moving away from regions with declining labour demand towards expanding

regions (Topalova, 2010; Kovak, 2013; Bell et al., 2015; Dix-Carneiro and Kovak, 2017; Erten, Leight and Tregenna, 2019). As discussed in Chapter C, workers face important mobility costs when switching sectors. These costs vary significantly across economies, but tend to be larger in economies that are poorer and have less developed labour market institutions (Dix-Carneiro, 2014; Artuç, Lederman and Porto, 2015). The factors that constrain labour mobility, especially in developing economies, are not yet well understood. Besides migration frictions and labour market institutions that reduce flexibility, workers may face high costs of searching for employment opportunities, and difficulties in adjusting their skills to the demands of growing sectors. Empirical evidence also suggests that a combination of migration frictions and imperfect capital markets can exacerbate the distributional effects of trade. This is further discussed in Chapter C.

Labour cost distortions in low-income economies are higher for firms using modern technologies, which slows down trade-induced technology adoption. As discussed in Section B.2, better access to intermediate inputs incentivizes the adoption of modern, intermediate input-intensive technologies, thereby raising aggregate labour productivity. Based on firm-level data from the World Bank Enterprise Survey, a recent study suggests that distortionary regulations and taxes on labour are more prevalent in developing economies, especially for larger firms (Farrokhi, Lashkaripour and Pellegrina, 2024). Since the adoption of modern technologies is typically driven by large firms, these labour market distortions hamper productivity gains from trade-induced technology adoption. Using a quantitative model, the study suggests that labour market distortions erode, on average, one-third of the potential labour productivity gains from trade among low-income economies.

An additional barrier to trade adjustment and productivity growth, which affects mainly smallholder farmers, is related to land rights and land acquisition. Expanding production and improving productivity in the agriculture sector can involve investment in technology and in high-value and high-quality product varieties. However, inadequate land registries and weak legal systems are often cited as one of the institutional barriers that hinder investment in agriculture-dependent LDCs. This issue is particularly severe in post-conflict regions where, due to forced displacement and the loss of title deeds, customary and statutory land tenure systems may not coincide. Without clear land titles, smallholders are often unable to secure financing to improve and scale

up production. By establishing a clear legal framework for land policy and enforcing land rights, governments could address this issue and support productivity growth and diversification.

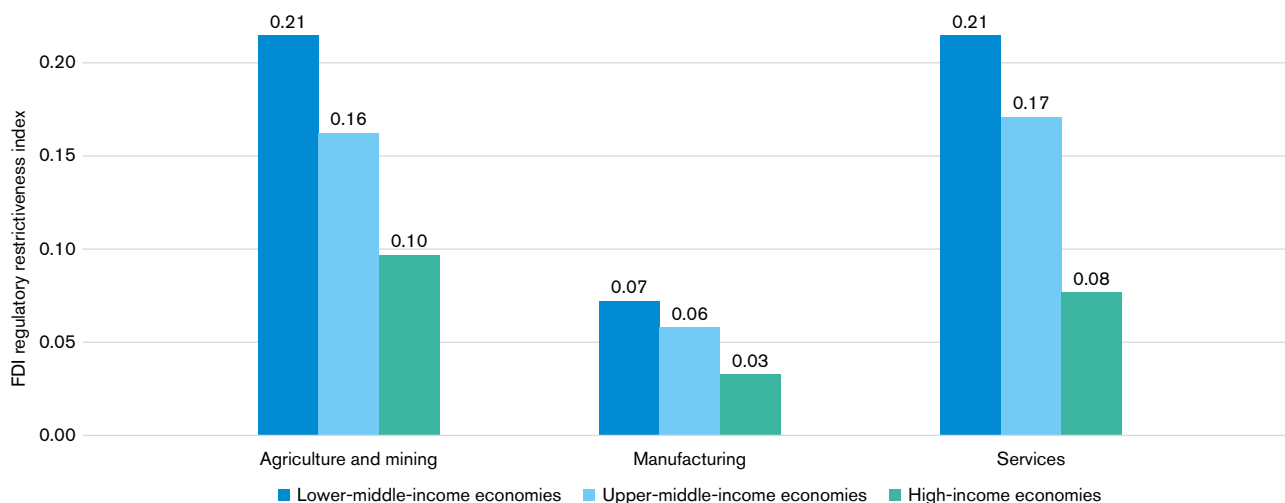
(ii) Barriers to FDI and technology transfer can impede productivity growth and innovation

Trade and FDI are inherently linked, and so are trade and investment policy. MNEs set up foreign production activities for various economic reasons – to be closer to a large consumer base, to access natural resources or technology, or to increase the cost efficiency of their production process. But irrespective of the main driver of FDI, MNEs engage more in importing intermediate inputs and in exporting their products than their local counterparts. Openness to trade and economic integration with regional partners are also therefore major determinants of FDI, which in turn drives participation in GVCs and economic upgrading.

FDI restrictions in manufacturing are relatively low compared to other sectors. The OECD FDI regulatory restrictiveness index provides a glimpse into the degree of statutory restrictions on FDI across all sectors of the economy, including foreign equity limitations, discriminatory screening or approval mechanisms, restrictions on the employment of foreigners as key personnel, and other operational restrictions, such as restrictions on capital repatriation or on land ownership by foreign-owned enterprises. Based on information for 39 high-income, 25 upper-middle-income and 16 lower-middle-income economies, the FDI index shows that restrictions in the secondary sector (especially in manufacturing) are relatively low compared to agriculture, mining and service sectors (see Figure B.9).

Middle-income economies remain relatively less open to FDI than high-income economies. The FDI index also shows that restrictions on FDI inflows decrease with income level. That is despite significant progress in liberalizing FDI regulations between 2014 and 2020 in lower-middle-income economies, which lowered the group's average restrictiveness index by 20 to 30 per cent. Restrictiveness in upper-middle-income economies, on the other hand, declined little during that period. A drawback of the FDI index is that it lacks data for low-income economies. Some information for this group can be gauged from the World Bank-WTO services trade restrictions index which scores barriers to establishment of foreign presence for a range of services sectors. The index shows that, on average, low-income economies have a similar level of restrictions to that of the lower-middle-

Figure B.9: Higher FDI regulatory restrictiveness in lower-income economies, 2020



Source: Authors' calculations, based on OECD data on FDI regulatory restrictiveness.

Note: The figure shows the average FDI regulatory restrictiveness index in 2020 by sector and income group. The regulatory restrictiveness index varies between zero and one. The analysis covers 80 economies, including 25 upper-middle-income and 16 lower-middle-income economies. The income groups are based on the 2020 World Bank classification.

income group, but LDCs, which are in both income groups, exhibit the highest level.

Improving local workforce skills, infrastructure, the business climate and the competitiveness of local supply chains helps to attract FDI and maximize its benefits to the local economy.

Aside from the size of the market and direct barriers to FDI, other factors are important for attracting investment. Evidence suggests that foreign investors are more concerned with improvements to transport and logistics, access to skilled workers, technicians and managers, and business climate reforms than with direct subsidies, tax breaks or subsidized inputs. Moreover, promoting entrepreneurship to create competitive supply chains of local firms in the host economy generates both incentives for MNE establishment and the potential for positive spillovers from MNE activity (Freund and Moran, 2017). Foreign firms will only transfer advanced technology to their subsidiaries if the skills of the local workforce and the level of sophistication of their local suppliers and customers make such transfer profitable. Furthermore, they will invest in capabilities of local suppliers only if the technology gap is not too large (Branstetter and Maskus, 2022). Local content requirements that aim to foster linkages with domestic firms have a mixed record, often discouraging foreign investment rather than maximizing its benefits, especially in small markets without the skills and expertise that can substitute for imported products (World Bank, 2020).

Finally, measures targeting coordination failures within sectors, information asymmetry between foreign and local investors and complementary policies like financial market development are essential for promoting, attracting and maximizing the benefits of FDI (Harrison et al., 2010; Bilir, Chor and Manova, 2019).

A robust IP regime can also attract FDI by providing multinational corporations with the confidence that their investments will be protected. Companies are more likely to invest in economies where their IP rights are enforced, as this reduces the risk of unauthorized use or imitation of their technologies and products (Maskus, 2000). Moreover, Branstetter et al. (2006) found that patent law changes in emerging economies with US affiliates led to a rise in royalty payments to US parent firms due to increased volume of technology sales and a significant increase in R&D investments at local subsidiaries, particularly in high-technology industries.

Investment facilitation has become an important policy tool for attracting FDI. To enhance their attractiveness to FDI, developing economies have been adopting measures that improve the business environment, simplify administrative procedures and help investors access information. Investment facilitation policies have become a complementary tool to help economies to achieve their investment objectives, including by reducing information asymmetry, lowering transaction costs for investors

and undertaking the aftercare of investors (Sauvant, 2015; OECD, 2018). Investment promotion agencies can play an important role, for example by monitoring and actively working to improve an economy's investment climate (de Crombrugghe, 2019). However, analysing the effectiveness and impact of investment promotion agency activity remains challenging (López and García, 2020).

Where improving infrastructure and regulatory environment at the country level requires a leap, special economic zones (SEZs) can serve as a stepping stone. SEZs have been used successfully to diversify exports and stimulate economic activity by circumventing business environment challenges and experimenting with new policies (UNCTAD, 2021b). They provide special incentives and infrastructure to attract foreign direct investment and improve the competitiveness of local firms. Policy incentives typically

include import/export duty exemptions, streamlined customs procedures and low tax rates (Monga, 2017). For instance, Costa Rica's 2010 reform of the Free Trade Zone Regime was undertaken with the aim of enhancing foreign investment and promoting productive linkages, particularly in sectors like medical equipment and devices (Salazar Xirinachs, 2022). The reform was accompanied by a proactive stance on FDI through institutional support, workforce training programmes and R&D collaborations (Martinez and Padilla, 2017; Monge-González, 2017). Costa Rica's export and investment promotion agencies have played crucial roles in attracting and assisting companies, offering comprehensive support and strengthening local supplier integration. However, while several SEZs in Southeast Asia have also been an integral part of successful outward-oriented policies, in many African economies they have failed to deliver similar results (see Box B.5).

Box B.5: The challenges of using SEZs to improve trade participation and attract FDI in Africa

While African economies have historically been considered latecomers to the adoption of SEZs, the continent is now witnessing a widespread proliferation of these zones, with Kenya, Nigeria, Ethiopia and Egypt leading the way, and East Africa emerging as a hotspot for SEZs (UNCTAD, 2021b). Despite this growth, the experience with SEZs in Africa has been mixed. Many African SEZs host only a few firms and make limited contributions to national employment, except in economies like Djibouti, which are strategically located along major trade routes (UNCTAD, 2021b). Furthermore, most African economies have struggled to achieve significant structural transformation through SEZs, with limited benefits in technology transfer and skills upgrading (Farole, 2011; Farole and Moberg, 2017).

Due to limited government financial resources and poor institutional design, SEZs in Africa often fail to tackle the broader economic challenges of high factor and transaction costs, the lack of basic infrastructure and ineffective policies (Monga, 2017). In addition, political capture and rent-seeking, resulting in suboptimal location choices and firm selection, further exacerbate the underperformance of these zones.

Solutions proposed in the literature include aligning development and SEZ strategies with potential comparative advantages, promoting competitive firms with effective backward linkages, and developing cluster-based industrial parks where economies of scale, intra-industry knowledge spillovers, shared supplier and customer bases, good supply chains and logistics, and other agglomeration effects can be achieved (Farole and Moberg, 2017; UNCTAD, 2021b; Malindini, 2022). Success hinges on effective institutional arrangements, infrastructure development, and policy improvements that foster industry clusters and enhance vertical integration. Drawing lessons from the successful experiences of economies such as Ireland and the Republic of Korea, African economies could enhance their SEZ performance by improving the productivity of local suppliers through improved administration of duty-free access to imported inputs (Monga, 2017).

Overall, political commitment to good governance and effective policy implementation at the highest levels of government is essential to signal to potential investors that constraints on doing business in SEZs are being addressed. The implementation of the African Continental Free Trade Area, addressing both rules of origin and economies' flexibility concerning SEZ regulation (Chi, 2021), may further help to capitalize on the opportunities of enhanced regional integration in Africa.

4. Future opportunities for economic convergence lie in strategies to keep trade open and supported by complementary policies

(a) Future economic convergence faces risks from emerging global trends

Emerging global trends such as geopolitical tensions, digital revolution and climate change are reshaping the landscape of trade-led development. While these trends may threaten future economic convergence, they may also present new opportunities for re-globalization, or increased global cooperation. The lessons from the past three decades provide important insights for the future. Notably, technological innovations can reduce costs in services trade and lead to more efficient and sustainable production methods, and global efforts to combat climate change can foster international cooperation and green investments. The future of trade-led development will hinge on policy choices that manage these risks while leveraging new opportunities to foster inclusive and resilient economic growth.

(i) Geopolitical tensions pose challenges for economic convergence

The rise in geopolitical tensions and trade fragmentation has been a prominent feature of recent years. The global economic dynamics have been impacted by various events, such as the China-United States rivalry, the war in Ukraine and conflicts in the Middle East. This period has also marked an increase in trade sanctions and the appearance of new forms of trade weaponization (i.e., interference with open trade for geopolitical reasons), undermining the relative stability that underpinned economic growth in the past three decades. Increasingly, trade and economic policies are influenced by national security concerns, characterized by “friend-shoring” policies, export controls, restricted trade and technology flows (including through export control), discriminatory sectoral and security-motivated trade agreements and calls for self-sufficiency.

Geopolitical tensions pose significant challenges for economic convergence. WTO simulations indicate that, in a decoupling scenario, if all economies were to align themselves either to an Eastern or to a Western self-contained trading bloc, global trade could drop by 13 per cent and technological spillovers could be hindered (WTO, 2023c), potentially resulting in losses exceeding 5 per cent of GDP, with

developing economies and LDCs projected to bear the brunt of the impact (Goes and Bekkers, 2022). A decoupled global economy could also reduce market scale, discourage investment and hamper knowledge exchange, posing significant demand-side constraints for sustained economic growth and poverty reduction, especially for low- or lower middle-income economies that do not have domestic markets large enough to experience sustained poverty reduction (Goldberg and Reed, 2023a).

Furthermore, geopolitical tensions threaten established GVCs, leading to efficiency losses and increased production costs. Research suggests that a full shutdown of GVCs, with no international trade in intermediate goods, could reduce welfare in all economies by between -3 and -68 per cent, with small, highly integrated economies experiencing the largest welfare losses (Eppinger et al., 2021). Finally, geopolitical tensions can undermine collective efforts to address major global challenges, such as climate change and food security, and the risks of conflict escalation resulting from these tensions exacerbate humanitarian crises.

While efforts to diversify can benefit certain economies, achieving global convergence remains elusive in light of geopolitical tensions.

Recent data reflecting trade tensions between China and the United States also suggest reallocation within global supply chain activities. While direct sourcing from China by the United States has declined, there has been a noticeable uptick in import shares to the United States from low-wage regions such as Viet Nam, as well as from nearshoring alternatives, notably Mexico (Alfaro and Chor, 2023). Trade tensions between China and the United States have led to trade being displaced to other economies, and export growth was stronger, on average, in economies with larger shares of their exports governed by strong trade agreements, and in economies with more FDI (Fajgelbaum et al., 2021). These findings suggest that some economies may benefit from geopolitical tensions. However, these benefits are insufficient for achieving long-term economic convergence. Simulations based on the WTO Global Trade Model show that, in a “partial rivalry” scenario where some developing economies and all LDCs remain neutral and do not impose higher trade costs on either bloc, on average there would be a 2.8 per cent loss in world GDP in 2050 relative to 2019. Although LDCs might benefit from avoiding alignment, their GDP growth would still fall short of achieving significant global economic convergence due to limited knowledge diffusion and productivity growth in the long term (Métivier et al., 2023).

(ii) Digital revolution enables new opportunities for services trade-led development

The increased capital and skill intensity of modern manufacturing has reduced the scope for manufacturing-led growth in low-income economies. Historically, economic growth has been accompanied by a transition from agriculture to manufacturing, and then eventually from manufacturing to services (Herrendorf, Rogerson and Valentinyi, 2014). The labour-intensive nature of manufacturing in the past played a significant role in economic growth. Manufacturing provided jobs for many, including a relatively unskilled workforce, driving urbanization and reducing rural unemployment. The labour-intensive nature of manufacturing also facilitated skills development, increased wages and stimulated consumer demand, further fueling economic growth and diversification. However, although today's large formal manufacturing firms account for a sizeable share of manufacturing production, they represent only a small share of manufacturing employment in many low-income economies. This reflects the trend in modern manufacturing towards higher capital and skill intensity, and therefore much less low-skilled employment. This represents an increasingly salient obstacle to manufacturing-led growth in low-income economies (Rodrik, 2013; 2016; Diao et al., 2021).¹⁸

Services trade can enable new trade-led development opportunities for low-income economies. Qualities traditionally associated with manufacturing, such as scalability and innovation, are increasingly found in certain services sectors, making them pivotal for development (WTO, 2019). As a result, labour productivity in services has been shown to exhibit unconditional convergence during the period 1975-2012 in large number of economies (Kinfe-michael and Morshed, 2019). It has been argued that the future of developing countries is in services as that is where the jobs will be (Rodrik and Sandhu, 2024).

The rise of digital technologies has transformed the trade landscape, making services more tradable. Digital technologies can reduce trade costs by optimizing logistics and reducing translation and searching costs. In particular, ICT technologies are making it possible for services to be delivered even when service providers and consumers are not in proximity. Consequently, trade costs in some services sectors are now comparable to those in the manufacturing industry (Gervais and Jensen, 2019). Within the services sector, professional, scientific, technical, ICT, financial and insurance services have

seen their export value added increase significantly since 2005, and these services also exhibit strong domestic linkages, facilitating productivity spillovers (Nayyar, Hallward-Driemeier and Davies, 2021). Transportation, telecommunications, finance and business services are increasingly utilized as intermediate inputs in goods production and export. This makes services exports a particularly attractive pathway for developing economies.

Trade in digitally deliverable services, in particular, has seen accelerated growth, including in low-income economies. Digitally deliverable services include services that can be traded through computer networks, such as the internet, apps, emails, voice and video calls, and digital intermediation platforms. Although some low-income economies are still lagging behind in exports of digitally deliverable services, several economies have registered significant growth. Ghana, Morocco and South Africa were responsible for more than half of African exports of digitally deliverable services in 2022, and in these three economies, along with Madagascar, growth since 2015 has surpassed that of the global average, primarily driven by business process outsourcing and IT services (World Bank and WTO, 2023b).

Furthermore, services and digital technologies can facilitate structural transformation and technology diffusion. Digital technologies can help to overcome information gaps associated with employment or financial transactions, thereby improving labour efficiency and the promotion of technology spillovers. For example, several studies have found that digital economy policies in China have helped regional industrial structure upgrading (Wu and Shao, 2022; Yang, 2023). Similarly, business consultancy services from a large international consulting firm have been found to substantially help factories in developing economies to reduce product defects and inventories and to increase output (Bloom et al., 2013). Learning systems driven by artificial intelligence (AI) can accelerate the development of fundamental human skills by enabling individualized learning at relatively low cost (Muralidharan, Singh and Ganimian, 2019).

Quantitative analysis shows that digitalization can lead to substantial trade growth, especially in low-income and lower-middle-income economies. A quantitative analysis using the WTO Global Trade Model offers insights into how three key trends in digitalization could shape long-term trade patterns by 2040: (i) AI-driven productivity

increases; (ii) lower trade costs due to digitalization, including streamlined customs procedures, better logistics, language translations technologies, online sales (e-commerce) and less need for face-to-face interaction; and (iii) changes in trade costs related to data policies (Bekkers, Kalachyhin and Teh, 2024). As shown in Figure B.10, AI-driven productivity increases and reductions in trade costs could have significant impacts on trade growth, especially in low-income and lower middle-income economies.

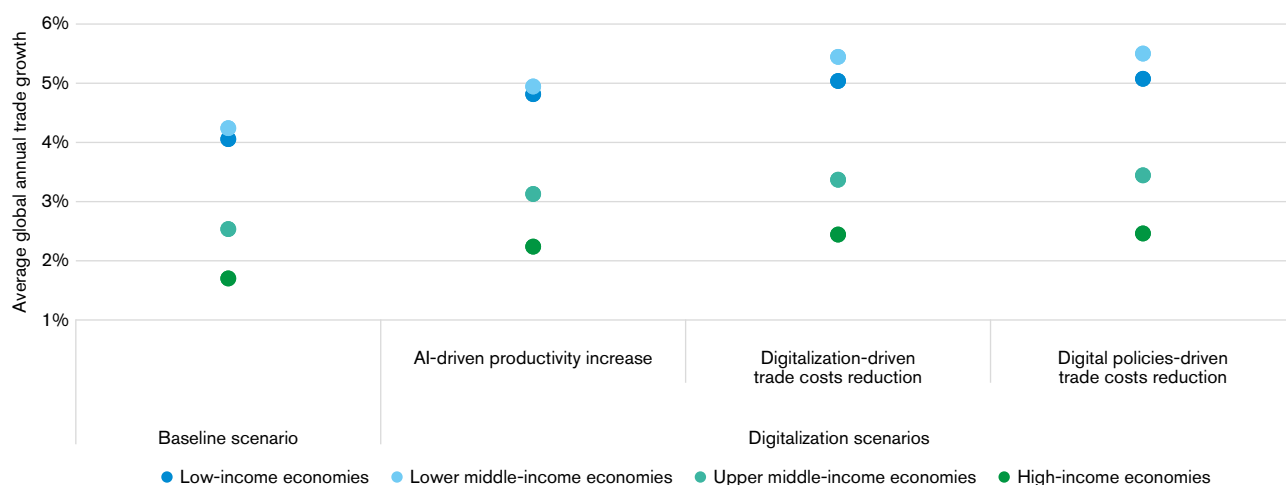
New digital technologies offer significant opportunities for global trade. Developing economies can leverage digitalization to adopt new technologies and reduce trade costs to levels similar to those in developed economies, particularly in logistics and digital connectivity. By enabling cross-border trade for services that have traditionally needed face-to-face interaction, digital technologies are likely to reduce the cost of trading in services, allowing low-income economies to better exploit their cost advantages in digitally deliverable services. In addition, international cooperation in data policies to balance data flow and safeguards would allow some developing economies to lower their trade costs and enhance their participation in global production.

However, several factors may impede the developmental benefits of digital technologies, requiring policy responses. The existence of a digital divide in infrastructure and skills threaten the ability of low- and middle-income economies to engage fully in these new opportunities (see opinion piece by Landry

Signé). AI-related productivity growth depends on an economy’s readiness for implementation, and high-income economies are generally better prepared due to their existing digital infrastructure and skilled labour force. Moreover, automation, robotics and other labour-replacing technologies risk devaluing the sources of comparative advantage of many developing economies, and deteriorating their terms of trade, potentially contributing to divergence (Korinek and Stiglitz, 2021). In this context, the share of trade based on labour-cost arbitrage, particularly in labour-intensive manufacturing, dropped from 55 per cent in 2005 to 43 per cent in 2017 (Lund et al., 2020). Furthermore, geopolitical tensions could lead to more restrictive data policies, increasing trade costs and hindering trade integration in data-related goods and services.

Policies can play a crucial role in enabling low-income economies to catch up in driving projected trade growth in digitally deliverable services. To illustrate the trade impact of different policy choices, the quantitative analysis distinguishes between two scenarios: (i) a convergence scenario, which features greater productivity growth and trade cost reductions for low-income economies; all economies adopt “open safeguard” data policies,¹⁹ and (ii) a core scenario with uniform productivity and trade cost changes across all economies and restrictive data policies in transactions between economies in different geoeconomic blocks. Under the convergence scenario, the average annual trade growth of digitally deliverable services in low-income economies is projected to be

Figure B.10: Positive impact of digitalization on global average annual trade growth, 2017-40



Source: Authors’ calculations, based on Bekkers, Kalachyhin and Teh (2024).

Note: The figure shows the global average annual trade growth by 2040 by income group under four scenarios. The analysis, based on the WTO Global Trade Model, considers (i) a baseline scenario without digital technologies, (ii) a scenario assuming AI-drive productivity increase; (iii) a scenario with digitalization-driven trade cost reduction scenario; and (iv) a scenario assuming changes to trade costs related to data policies. The income groups are based on the 2022 World Bank classification.

Leveraging trade to foster a more inclusive digital economy in Africa

By Landry Signé

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The spread of emerging and digital technologies, also called the Fourth Industrial Revolution, is drastically affecting trade, economic competitiveness and development, including in Africa (Signé and Ndung'u, 2020; Signé, 2023a). Global exports of information and communications technology (ICT) services increased at an average annual rate of 8 per cent between 2005 and 2016, and revenues for e-commerce, another prominent feature of the digital economy, reached US\$ 25.6 trillion in 2018. A striking feature of e-commerce trade is its uneven distribution across countries: China alone makes up 23 per cent of total e-commerce trade, while the top 10 advanced economies made up 75 per cent of the total. In contrast, more than 75 per cent of the world's adult population has no access to e-commerce (UNCTAD, 2017).

African economies and populations face a significant digital divide that limits their participation in the globalizing digital economy. Less than one-third of Africans have access to internet connections (ITU, 2019). The costs of this digital gap were apparent during the recent COVID-19 pandemic, when African economies struggled to sustain remote working and virtual schooling. In Nigeria, for example, virtual education proved infeasible during the period of lockdown, with only one third of the country's primary and secondary school students engaging in virtual education.

Africa's digital divide could further widen with the inevitable maturity of disruptive digital technologies including artificial intelligence, cloud computing, big data, the Internet of Things, high-speed broadband, blockchain, autonomous vehicles and 3D printing (Signé and Ndung'u, 2020). African countries have a narrowing window of time to bridge the digital divide and strengthen their competitiveness to capitalize on the opportunities offered by the growing digital economy (Signé, 2020). Among other things, this will require fixing the continent's digital skill gap and mismatch, and building its digital competitiveness to international standards (Signé, 2023b).

To unlock Africa's digital economy, it is necessary to foster the enabling environment and to leverage physical, digital, human, agility, perception and technology capitals. African countries therefore have the unique opportunity to leverage trade and trade policies to foster a more inclusive digital economy.

Trade facilitates access in Africa to emerging and digital technologies and to the infrastructure needed for an

inclusive digital economy, as most of these are produced outside of Africa.

Trade policies and agreements can offer specific mechanisms to help bridge the digital divide. For example, they can advance an inclusive digital economy by including provisions that facilitate trade in areas related to the digital economy, and by removing barriers to digital products and services that facilitate the adoption of digital infrastructure and measures. Removing such barriers would lower the cost of goods and services (e.g., internet infrastructure, access to networks, digital devices, information and communications technology equipment), which could help to accelerate the development of African digital economies.

Such provisions can also help unlock investment to facilitate physical, technological, socio-demographic and cognitive access for African economies to digital technologies, thus allowing a sustained digital presence and effective and productive usage of digital technologies. This is particularly important given the variation of levels of education, income and access to information, technology literacy and resources that leave some people and economies excluded from full participation in the digital economy.

Another example is the adoption of provisions that enhance flexibility for digital measures, affirming the policy space to adopt digital measures. The African Continental Free Trade Area Protocol on Digital Trade provides an illustration of such mechanism. It aims to harmonize digital trade in Africa, with provisions related to market access, consumer trust, facilitating digital trade, treatment of digital products, and data governance, and it is inclusive of provisions guaranteeing duty-free digitally delivered services within Africa. The Protocol also allows for the creation of exceptions from trade-restrictive provisions implemented for legitimate digital objectives; for example, it allows for not implementing duties on digitally delivered services from third-party economies under certain circumstances, subject to rules of origins, in order not to slow the development of an inclusive digital economy, for example by harming smaller businesses.

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11.7 per cent, compared to 7.0 per cent under the core scenario (see Figure B.11). Nonetheless, the growth rate of digitally deliverable services remains higher in low-income economies compared to middle and high-income economies in both scenarios.

Thus, although digitalization offers substantial opportunities for developing economies through service exports, it also presents challenges.

Developing economies have already made important inroads in leveraging services trade, but much remains to be done to fully realize the sector’s development promise. Moreover, international cooperation is essential to provide greater transparency and predictability to services trade regimes, mitigate identified drawbacks such as winner-takes-all dynamics and data flow restrictions, to ensure inclusive access to digitalization and its benefits for developing economies (World Bank and WTO, 2023a).

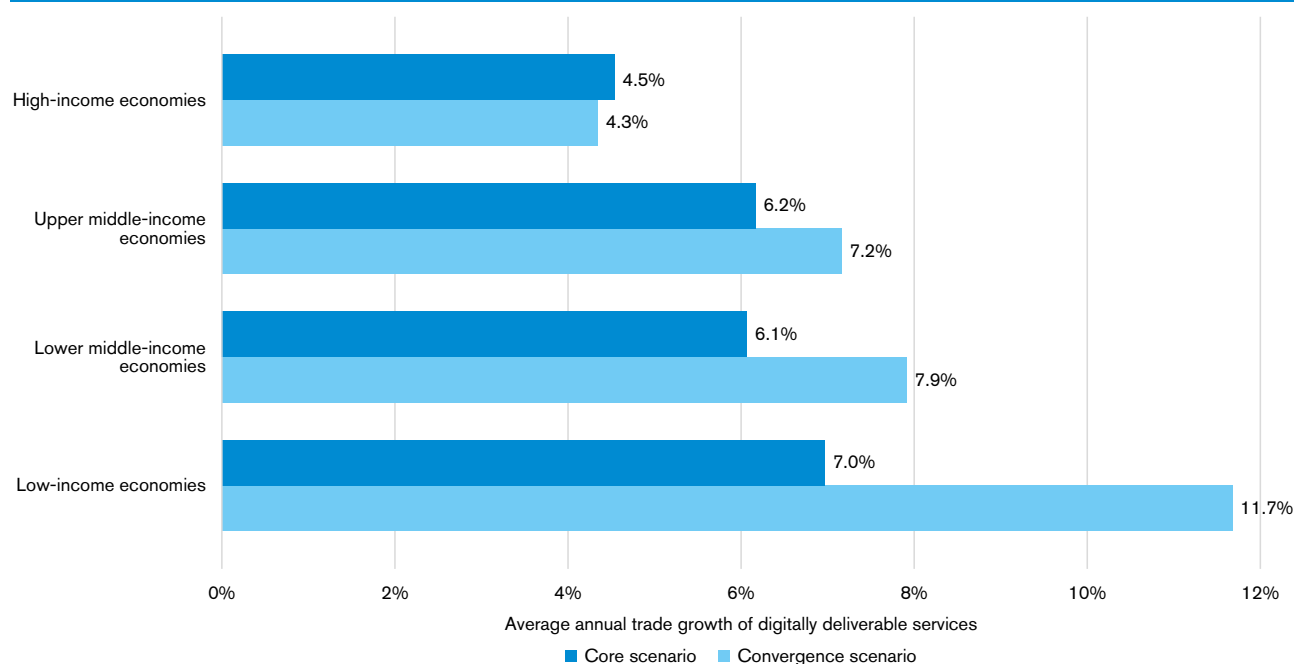
(iii) Climate change is a threat to convergence, but new opportunities are emerging from the green transition

Climate change and other environmental challenges can significantly impact income convergence, primarily through their

disproportionate effects on certain geographic regions. Low-income economies that already face economic hardship may encounter exacerbated challenges due to diminished productivity resulting from rising temperatures and climate-related natural disasters. These events can disrupt livelihoods, damage infrastructure, and impede growth prospects (WTO, 2022). Empirical evidence suggests that, while the productivity of wealthy economies may not be severely impacted by temperature rise, the same factor causes macroeconomic productivity declines in poorer economies (Dell, Jones and Olken, 2012). Recent research indicates that the world economy faces a 19 per cent income reduction over the next 26 years, regardless of future emission choices, with the greatest damage in regions already experiencing higher temperatures and greater economic vulnerability (Kotz, Levermann and Wenz, 2024). In addition to economic costs, climate change can also exact a direct human toll, and could potentially cause 6 million more deaths per year by 2100 if the emission trajectory is not altered, a figure which exceeds all current deaths from infectious diseases combined (Carleton et al., 2022).

Furthermore, climate change can influence income convergence by reshaping the economic

Figure B.11: Higher export growth in digitally deliverable services under a convergence scenario, 2017-40



Source: Authors’ calculations, based on Bekkers, Kalachyhin and Teh (2024).

Note: The figure shows the average annual growth rate of trade in digitally deliverable services by 2040 by income group under two scenarios. The analysis, based on the WTO Global Trade Model, considers: (i) a core scenario with uniform productivity and trade cost changes across all economies and restrictive data policies, and (ii) a convergence scenario featuring greater productivity growth, trade cost reductions for low-income economies and “open safeguard” data policies.

structure of regions. Industries dependent on natural resources, such as agriculture, forestry and fisheries, may experience decreased productivity or heightened risks due to climate change impacts. Conversely, regions specializing in climate-resilient sectors like renewable energy may see opportunities for economic growth.

Meanwhile, climate change and the green transition offer opportunities for low-income economies. Many low-income economies are situated in geographical regions with significant renewable energy potential, such as solar power, presenting an avenue to generate and export renewable energy or energy-intensive goods and service. For instance, Kenya has leveraged its abundant geothermal energy to attract investment to build a low-carbon data centre (Anton, 2024b). In addition, the increasing demand for clean energy goods for the green transition is expected to boost demand for critical minerals. Over the past two decades, annual trade in energy-related critical minerals, such as cobalt, copper, lithium, nickel and rare earths, has surged from US\$ 53 billion to US\$ 378 billion (WTO, 2024b). Many developing regions possess reserves of these critical minerals. Africa accounts for over 40 per cent of global reserves of cobalt, manganese and platinum – key minerals for batteries and hydrogen technologies. The Democratic Republic of the Congo, Mozambique and South Africa have a significant share of global production today, but many other economies may hold undiscovered deposits (IEA, 2022).

Uncoordinated trade policies addressing environmental concerns can present cost challenges for exports from developing economies. Without coordinated climate policies, governments may resort to imposing border adjustment measures to address carbon leakage and competitiveness concerns (WTO, 2022). Several studies find that carbon border adjustment mechanisms could reduce exports from developing economies and lower their income (UNCTAD, 2021a; AFC and Firoz Lalji Institute for Africa, 2024). In addition, many governments are implementing policies to enhance trade sustainability, including regulations mandating that imports meet specific sustainability standards, which can involve extensive diligence along the value chain. Some WTO members argue that such due diligence standards are costly to comply with and prohibit small enterprises from participating in trade.

The proliferation of green subsidies, while accelerating the green transition, could disadvantage lower-income economies. As

advanced and emerging economies introduce subsidies in green industries to promote sustainable practices and technologies, these measures can leave lower-income economies at a disadvantage due to their limited financial capacity to provide equivalent support. This disparity may make lower-income economies less attractive as investment destinations. There is concern that, like agricultural subsidies that have traditionally depressed prices and distorted markets, extensive subsidies in green and other industrial sectors could similarly hinder development opportunities in the future. Unless the diffusion of the green technologies driven by support measures in advanced and emerging economies spread to lower-income economies, the gap in access and adoption of sustainable solutions may widen.

(b) Various strategies can contribute to enhance trade-led development in the future

In light of the global trends, re-globalization can be an important driving force for future economic convergence. Re-globalization entails extending trade integration to more economies, people and issues. The diversification of GVCs would allow economies a chance to engage in globalization more extensively. As mentioned above, digital technologies can allow economies with strong connectivity and skills to use emerging opportunities in services trade to drive development, and economies endowed with renewable energy and natural resources stand to gain from trade prospects arising from the green transition.

To seize development opportunities amid these trends, a comprehensive approach entails implementing various domestic and trade policies. As summarized in Table B.2, and following the lessons from the past discussed above in this chapter, a range of strategies can help developing economies capitalize on future trade opportunities by tackling trade costs, promoting diversification based on comparative advantages, and maximizing trade growth dividends by facilitating technology transfers.

(i) Open trade is essential to enhance resilience and technology diffusion

Keeping trade open is essential to mitigate the risks of trade fragmentation and promote economic development. For low-income and small open economies, keeping trade open and avoiding geopolitical alignment are necessary to maintain the benefits of trade. Multilateral mechanisms are vital to avert trade conflicts and guarantee lasting economic security. As elaborated in Chapter D, prioritizing the reinforcement of the multilateral trading system is the

Table B.2: Opportunities, challenges and strategies to enhance trade-led development

Opportunities and challenges	Strategies
Geopolitical tensions pose significant challenges for economic convergence, putting at risk past achievements as well as the prospects for those who have been so far left behind.	Keeping trade open is essential; support for diversification of supply chains can enhance resilience, foster technology diffusion and help overcome demand-side constraints in developing economies.
New digital technologies offer significant opportunities for global trade, especially in services. Development opportunities hinge on economies' digital readiness and policy choices.	Overcoming trade costs requires addressing the digital infrastructure and skills gap, open services trade policy and enhancing regulatory capacity.
Climate change and other environmental challenges can significantly impede income convergence, while the green transition can offer new export opportunities.	Developing economies abundant in renewable energy sources and critical materials underpinning the environmental transformation may leverage their comparative advantage to enter green supply chains, but also need robust institutions to avoid the "Dutch Disease".

most effective path toward nurturing sustainable and inclusive long-term development.

Open trade also bolsters economic resilience against shocks from policy changes and natural disasters. Trade helps to diversify access to global goods and services, enabling economies to pivot to alternative suppliers amid disruptions from policy changes, natural disasters or other unexpected shocks. Diversification, in terms of cultivating a broader and more varied network of trading partners, promotes overall economic resilience, albeit at the expense of higher costs. Furthermore, firms engaged in trade, and particularly exporters, are more likely to survive economic downturns due to their higher average productivity and access to diversified markets compared to non-exporters (WTO, 2021b). Thus, maintaining open trade is essential to address disruptions that could escalate due to geopolitical tensions and climate change.

Outward-oriented policies aimed at attracting investment and participation in GVCs can help technology absorption and diffusion. Open trade and investment policies enable the global deployment of renewable equipment and essential technology, leading to infrastructure, technology and workforce skill improvements to meet international standards. This, in turn, drives productivity enhancements and innovation within domestic industries. Equally crucial is fostering widespread technology adoption within the domestic economy. Firms play a central role in adopting advanced technologies and diffusing them across the wider economy. Policies facilitating

technology adoption include disseminating information about available technologies, such as through learning from other firms via GVCs (Comin and Mestieri, 2013; Cirera, Comin and Cruz, 2022).

(ii) Harnessing new services trade opportunities requires addressing trade costs and implementing relevant complementary policies

In order to reduce trade costs in the digital age, economies are required to tackle the digital infrastructure and skills gap through significant investments. Numerous studies have highlighted the positive impact of the internet on export growth (Freund and Weinhold, 2002, 2004; Herman and Oliver, 2023; López-González, Sorescu and Kaynak, 2023). For example, the gradual introduction of submarine internet cables in Africa has been shown to yield substantial positive effects on employment, particularly in higher-skill occupations, with a portion of these employment gains attributed to an increase in direct exports (Hjort and Poulsen, 2019). Government spending on digital infrastructure also spurs private investment, with faster internet connections correlating with greater benefits on digitalization (EIB, 2024). To bridge the digital skill divide, educational and training systems must integrate a balanced mix of core and technical skills into early education and sustain this development throughout lifelong learning endeavours (ILO, 2021a).

Strong institutions and regulatory capacities are important in harnessing the opportunities by the digital revolution. Open and robust

government regulations in digital markets can facilitate more effective utilization of digital technology for development purposes. Effective regulations can create an environment conducive to innovation and competition, fostering the growth of digitally enabled industries and ensuring fair market practices. Research shows that a robust regulatory framework that ensures trust in digital markets and fosters open access to digital infrastructure, services and data amplifies the impact of digital connectivity, enabling economies to fully capitalize on the advantages of digital trade (Bellucci, Rubinová and Piermartini, 2023). A deepened commitment to supportive domestic business environments and to trade openness in services form an important part of the comprehensive growth-enhancing policy agenda (World Bank and WTO, 2023a).

Government policies are needed to address the challenges posed by the digital revolution.

To tackle competition and job displacement in the digital economy, government strategies may involve encouraging larger firms in services to create lower-skill jobs, facilitating access to productivity-enhancing investments for smaller enterprises, and investing in technologies that complement low-skill workers in service sectors (Rodrik and Stiglitz, 2024). While prioritizing infrastructure and education, targeted government support can also spur digital industrial development. For instance, Manelici and Pantea (2021) noted that Romania's income tax break for software programmers in the early 2000s effectively stimulated the information technology sector, contributing to economic growth. However, effective government support policies must be carefully designed and accompanied by strong institutions to prevent misuse of subsidies and distortions in the economy. Robust policies aimed at curbing industrial concentration and promoting competition are important to effectively address winner-take-all dynamics, especially within the digital industry.

(iii) Robust institutions, complementary policies, and investment are key determinants for sustainable growth in resource-rich developing economies

Leveraging the green transition for trade-led development necessitates significant investment.

Mineral-rich economies can prioritize efficient extraction and processing of resources, investing in sustainable mining practices to mitigate environmental impact and ensure a stable supply of raw materials. These economies can further enhance value by directing investment into downstream manufacturing processes,

refining minerals into higher-value intermediate or finished products, such as battery cells or electric vehicle components, thereby fostering the creation of skilled jobs. Exporting renewable energy requires significant infrastructure upgrading in these economies, to establish the technological capabilities for capturing, storing and transmitting energy over extended distances. Scaling up climate action in emerging and lower-income economies would require an additional 2 per cent of their GDP per year by 2025, and 4 per cent of GDP per year by 2030 (Songwe, Stern and Bhattacharya, 2022).²⁰

To harness trade opportunities, economies must establish regulatory capacity to meet certification requirements for sustainable exports.

As many economies are implementing sustainability regulations, meeting these standards becomes pivotal for future trade-led development. This entails developing robust quality infrastructure systems comprising institutions and legal and regulatory frameworks that are needed for ensuring compliance with environmental standards and certifications, as well as facilitating the monitoring and enforcement of sustainable practices throughout the production and supply chains. Advanced economies must ensure that environmental standards and compliance mechanisms are harmonized to avoid creating a spaghetti bowl of complex and contradictory regulations. Establishing mutually recognized standards and enhancing regulatory capacity is crucial not only for enhancing market access for environmentally friendly products, but also for safeguarding against greenwashing and maintaining credibility in global markets.

Robust institutions and complementary policies are necessary to foster wide economic development in resource-abundant economies.

While the green transition offers export opportunities for resource-abundant developing economies, harnessing the benefits of extractive industries for broader economic development can pose challenges. Addressing the "Dutch Disease" requires investing in institutions to manage natural resource revenues and stimulating the manufacturing, agriculture and services sectors for long-term growth. Strengthening institutions can involve enhancing transparency, accountability and anti-corruption measures in revenue management, along with establishing robust legal frameworks for resource extraction. In the past three decades, many developing economies, particularly commodity exporters, have adopted fiscal rules and established sovereign wealth funds to build buffers during commodity price booms and to prepare for price slumps (Marioli and Vegh, 2023).

5. Conclusions

International trade has contributed significantly to the unprecedented global income convergence of the past three decades. International trade creates opportunities for developing economies to overcome their relatively small economic size and achieve economies of scale, to enhance the competitiveness of their domestic markets, to gain access to technology through imported products and interactions with foreign firms, and to produce complex products, or their components, by participating in multinational production networks.

Some economies have, however, experienced limited economic growth. Trade costs remain high in developing economies, especially in low-income economies and LDCs. Trade policy plays an important role in the overall level of these trade costs, as low-income economies and LDCs still apply relatively restrictive trade policies, but also face higher trade policy barriers in their export markets due to their lower capacity to comply with foreign policies and regulations. In addition to trade policy, other structural and institutional factors weigh on the foreign trade of some developing economies. Poor-quality and highly-priced infrastructure services, often exacerbated by services trade restrictions, result in high costs of transportation and distribution, as well as in limited access to electricity and telecommunications, which can slow down the adoption of new technologies.

Some economies, despite relatively high levels of trade participation, have not succeeded in diversifying into higher-productivity sectors or activities, and their economic growth remains slow. Specialization in commodity extraction and production can create a number of challenges, including exposure to high price volatility and negative effects on the competitiveness of other sectors. In the case of highly capital-intensive extractive activities, these challenges also include low positive spillovers to the broader economy, with potential implications for increased inequality. This can negatively affect growth prospects, as more unequal societies with a small middle class lack a source of domestic demand that can drive sustained growth.

Factors that slow structural transformation and reduce technology diffusion also diminish the potential of trade to accelerate economic growth. Improving the functioning of domestic capital, labour and land markets facilitates the economic adjustment needed to realize the gains from trade. The benefits of structural reforms are, in turn, enhanced by outward-oriented development strategies that help

to attract FDI and maximize the benefits that MNEs can bring in terms of technology diffusion, economic upgrading and access to global markets.

Rising geopolitical tensions, digital revolution and climate change are shaping future opportunities for trade-led development. These three trends not only threaten future income convergence, but also past achievements: geopolitical tensions can lead to increased obstacles to trade and investment and to fragmentation of the international trading system; new technologies facilitating automation may undermine the prospects for traditional labour-intensive manufacturing-led growth in low-income economies; and climate change disproportionately threatens livelihoods in these economies. On the other hand, new opportunities for developing economies arise from efforts to diversify global supply chains, from reductions in trade costs through digitalization, which are creating new opportunities for services-led growth, and from efforts to de-carbonize the global economy, which are creating new sources of comparative advantage in regions abundant in renewable energy sources, and are increasing the demand for certain critical minerals, deposits of which can be found in developing economies.

Reducing trade costs and ensuring that gains from trade are widely shared across the economy will be key. Keeping trade open is crucial to seizing new opportunities and minimizing risks. However, obstacles to trade arise not only from restrictive policies, but also from inadequate infrastructure, geographical remoteness and institutional challenges. Going forward, high trade costs in services, the digital divide between more and less developed economies, and regulatory capacity and compliance issues all need to be addressed to enable economies to take full advantage of new opportunities. As will be discussed in chapter D, international cooperation is essential to achieve an effective and predictable policy environment in these areas.

Endnotes

- 1 Economic growth has been found to lead to an almost one-to-one rise in the real income of the poor (Dollar, Kleineberg and Kraay, 2016). Some recent studies estimate that a 1 per cent increase in GDP per worker is associated with a 0.2-0.26 percentage point reduction in the US\$ 1.90-a-day headcount poverty ratio (Erumban and de Vries, 2021; Benfica and Henderson, 2021).
- 2 To measure trade participation, an adjusted trade share of GDP was used. One drawback of the standard trade share of GDP is that smaller economies appear to trade more than large economies. The trade participation index applied in this instance is adjusted for this economy-size bias. Specifically, the trade share of GDP for each economy and year is regressed on the economy's geographical size. The trade participation index is constructed by deducting the part predicted by this variable from the trade share of GDP. Geographical size was chosen over population size because it has better predictive power.
- 3 For a consistent comparison over time, these figures are calculated based on a sample of country pairs for which data are available throughout the entire period, and the income groups composition is fixed in 1995. If all the country pairs available in 2021 are considered, and the income classification in 2021 is used, the share of trade among high-income economies remains at 32 per cent, but the share of trade between high-income and the rest increases to 52 per cent, while the share of trade among low- and middle-income decreases to 16 per cent.
- 4 The income groups are based on the 1995 World Bank classification. The middle-income benchmark chosen is the real GDP per capita of Egypt in 1995, the year it reached lower middle-income status.
- 5 Fiji, Papua New Guinea, Solomon Islands, Tonga and Vanuatu did not converge while Samoa converged.
- 6 According to the Global Peace Index, diverging economies had 22 per cent lower political stability than the average in their income group.
- 7 In advanced economies, most productivity growth happened within sectors, while in emerging and developing (middle-income) economies, between-sector reallocation accounted for two-fifths of productivity growth between 1995 and 2017 (Dieppe, 2021). In developing Asia, productivity growth accounted for one quarter of all productivity growth between 1990 and 2018 (Erumban and de Vries, 2021).
- 8 For a detailed summary of the empirical evidence, see Blanga-Gubbay and Rubinová (2023).
- 9 See <http://tradecosts.wto.org/> for more details and methodology.
- 10 See <http://ptadb.wto.org/ptaList.aspx> for the list of preferential trade arrangements.
- 11 The multilateral review of trade concerns in the SPS and TBT committees at the WTO helps to shed light on potentially problematic measures, and encourages WTO members to avoid unnecessarily trade-restrictive measures that exceed benchmarks or do not follow best practice (WTO, 2012).
- 12 The OECD producer support estimates consist of two components: market price support and payments; only the payments component has been referred to here. Income groups are based on World Bank classification in 1995. The low- and middle-income group includes 16 emerging economies that were either low- or middle-income economies in 1995 and remained middle-income economies until 2021.
- 13 Governments sometime apply tariffs as infant industry policies. This involves government support for new and emerging industries to help them become competitive vis-à-vis established foreign competitors. Economists are divided on their efficacy. Proponents argue that these policies are essential for fostering innovation, creating jobs, and diversifying the economy, as nascent industries often lack the scale and experience to compete initially. Critics, however, contend that such protectionist measures can lead to inefficiencies, dependency on government support and complacency, ultimately harming the economy. The effectiveness of these policies largely depends on their design and implementation and on the broader economic context within which they are applied (Krugman, Obstfeld and Melitz, 2014).
- 14 The analysis is based on the World Bank-WTO Services Trade Restrictions Index for 2020 (or the latest available) and covers 134 economies, including 35 LDCs.
- 15 Based on the indicator "Transport cost intensity, in US\$ per ton-km". See <https://unctadstat.unctad.org/datacentre/dataviewer/US.TransportCosts>.
- 16 For example, there is no evidence of a positive effect of net gold exports on growth in South Africa (Ziramba, 2011). Meanwhile gold-dependent regions in Peru experienced more stable exports and growth in the 21st century (Orihuela and Gamarra Echenique, 2019).
- 17 The analysis is based on the product classification from UNCTAD (2024b). Raw products include unprocessed, fresh, chilled and frozen products; minimally processed products are cooked, steamed or dried, and include crude oils; processed products are fermented, smoked, sweetened, salted or brined.
- 18 Rodrik (2013) highlights that manufacturing's relatively small size in some poorer economies cannot provide a sufficient boost to economy-wide income from labour reallocation. Increasing capital intensity of the sector only exacerbates this issue.

19 “Open safeguard” data policies refer to cross border data transfer mechanisms that tend to leave more discretion to the private sector as to how to safeguard transfers (often in the context of existing principles or guidance provided in domestic regulation). These include ex-post accountability principles that allow cross-border transfers to take place without specific upfront requirements such as additional legal steps, contracts or private sector-led adequacy decisions.

20 For the specific investment and spending priorities identified above, emerging and developing economies other than China will need to spend around US\$1 trillion in 2025 (4.2 per cent of GDP compared with 2.2 per cent in 2019) and around US\$2.2 trillion in 2030 (6.9 per cent of GDP). As such, total investment for development and climate goals will have to increase by US\$3.5 trillion in 2030 (or 6.9 per cent of GDP) from the spending level in 2019 (Bhattacharya et al., 2022).

C Trade and inclusiveness within economies

Trade has raised aggregate welfare and reduced poverty without necessarily raising inequality in many economies, but the impact of trade is more complex for individuals. People may benefit from cheaper prices, larger variety and export opportunities, but they may also face increased competition and may, therefore, either gain or lose from trade. This chapter reviews why, although most people gain from trade, some suffer losses. These losses can be aggravated by distortions and barriers, such as mobility costs or monopolies, that tend to impact more vulnerable groups disproportionately, and may prevent them from adjusting to import competition and accessing export opportunities. The chapter also examines why using restrictive trade policy to redistribute gains from trade is often unsuccessful and can have unintended consequences, such as retaliation by trade partners. In contrast, domestic policies, such as education and social protection, are more effective in addressing inequality. Their importance is likely to grow as the digital revolution, climate change and geopolitics continue to shape the distributional impacts of trade.

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Key points

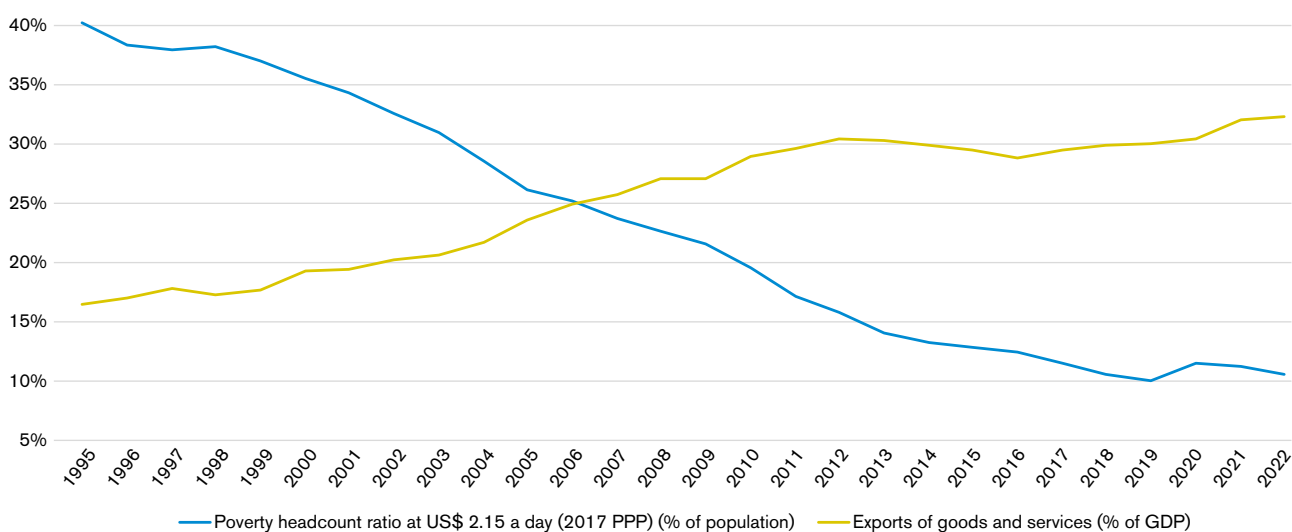
- Over the past 30 years, trade has generated substantial welfare gains and poverty reduction in many economies without necessarily raising inequality.
- Gains from trade are unevenly distributed among individuals within the economy. While trade generally brings benefits to many through more affordable goods and services and new job opportunities, some people may experience challenges due to import competition.
- Individuals with lower incomes, workers with fewer skills, small business-owners and some women may face challenges in adjusting to the new economic conditions associated with trade openness. In the absence of adequate policy responses, the effects of labour market disruptions can last for long periods.
- Using trade-restrictive policies to address distributional outcomes can have unintended consequences, such as increasing the prices of goods mainly consumed by poorer households. Domestic policies, such as lowering the cost of education or investing in rural infrastructure, are significantly more effective in addressing inequality.
- The digital revolution, climate change and geopolitical tensions increasingly affect how inclusive trade is and how it interacts with inequality. Domestic policies are essential to overcome new challenges to inclusive trade, such as the digital divide between rural and urban areas, differing opportunities for skilled and unskilled workers, or the unequal exposure of different groups to the cost of climate shocks.

1. Trade raises overall incomes and reduces poverty without necessarily increasing inequality

The expansion of trade over the past 30 years, since the creation of WTO, has helped to decrease poverty substantially. As highlighted in Chapter B, trade raises incomes and these income gains have led to significant benefits for some of the most vulnerable groups within economies. The number of people living in extreme poverty has fallen by over one billion since 1990 and trade has contributed substantially to this (World Bank and WTO, 2015). The poverty headcount ratio of low- and middle-income economies fell from 40.3 per cent in 1995 to 10.6 per cent in 2022, while the share of trade in GDP of these economies doubled from about 16 per cent to 32 per cent (see Figure C.1). Most of this increase in the share of trade in GDP occurred in emerging economies, which also managed to increase their share of global exports from 16 per cent to 35 per cent. Highly successful examples include China, which has tripled its share of world trade since joining the WTO, all the while cutting its extreme poverty rate from 36 per cent to less than 1 per cent, and Viet Nam, which has reduced its rate of extreme poverty from 60 per cent to less than 3 per cent since the 1990s through a combination of domestic reforms and reductions in trade barriers.

Growing incomes and falling poverty have been achieved in many economies without increasing inequality. On average, income inequality has slightly declined over the past 30 years, but it remains high in absolute terms, and some large economies face rising inequality. According to data from the World Inequality Database,¹ the average Gini index, a measure of inequality, across a large set of economies fell from about 0.58 prior to the global financial crisis to 0.57 in 2022 (see Figure C.2(a)).² However, the global average hides that some of the largest economies in the world, including China, Japan and the United States, saw steep increases in inequality in the 1990s and 2000s. Moreover, in absolute levels income inequality is high when compared to data over the past 100 years. The average share of income received by the top 1 per cent across all economies stands at 15.8 per cent. For some of the economies for which long data series are available, current inequality levels correspond to those last seen in the early 20th century. This is because of a steady increase in income inequality between the early 1980s and the mid-2000s that reversed a global fall in inequality present for most of the 20th century (Piketty, 2003; Piketty and Saez, 2003; Atkinson, Piketty and Saez, 2011) (see Box C.1). Like income inequality, wealth inequality has remained stable but high in the last three decades, with the average share of personal wealth held by the top 1 per cent falling from 31.4 per cent in 1995 to 30.6 per cent in 2022.

Figure C.1: Substantial poverty reduction alongside increased trade openness in low- and middle-income economies, 1995-2022



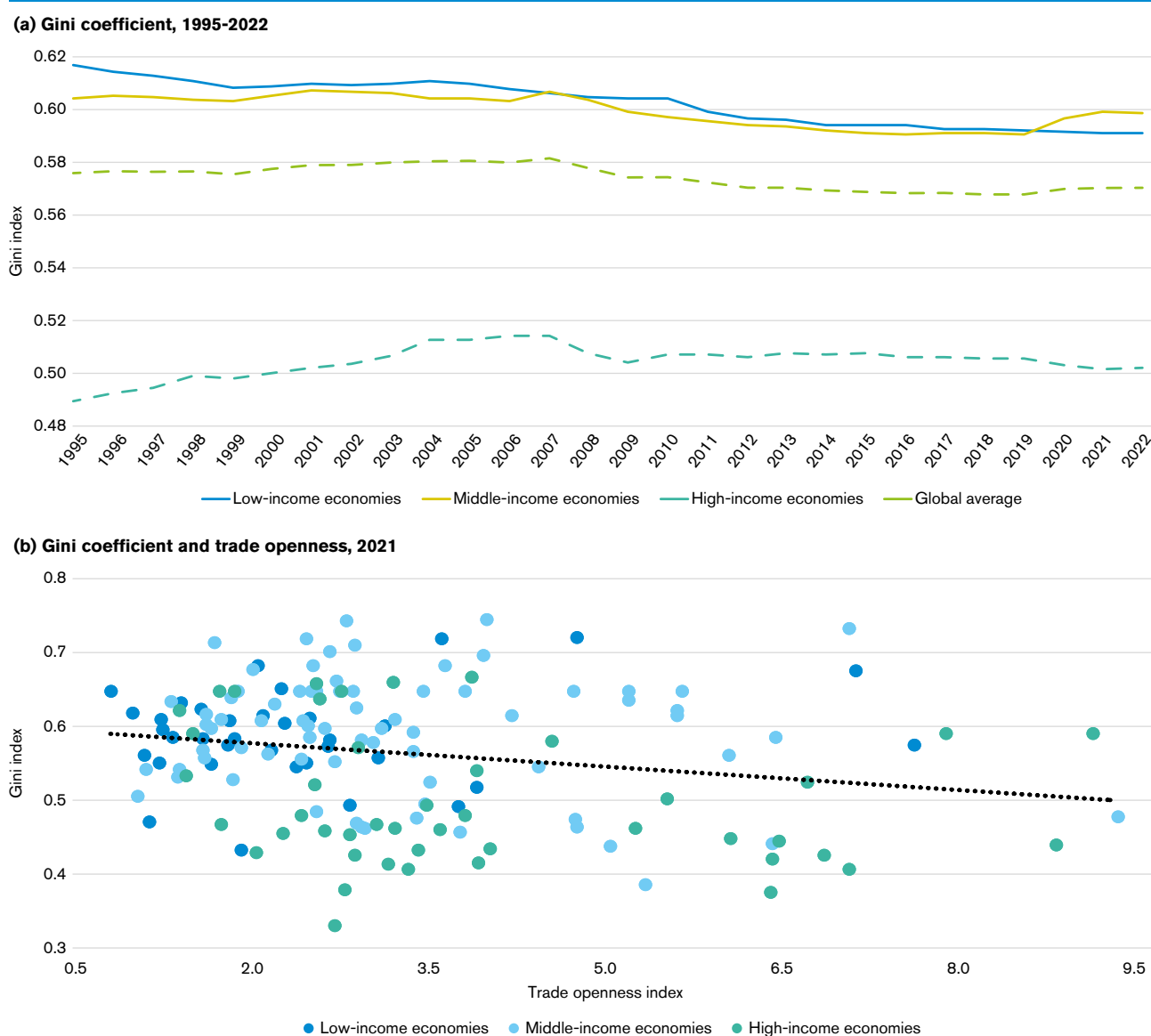
Source: Authors' calculations, based on World Bank data on poverty, exports and GDP.

Note: The figure displays the evolution of the average share of poverty headcount at US\$ 2.15 a day (2017 PPP) in population and the average share of exports of goods and services in GDP for low- and middle-income economies over the period 1995-2022. The income groups are based on the 2022 World Bank's classification.

Trade may increase or decrease inequality within an economy, but its overall impact on inequality tends to be small. The slight fall in inequality over the past 30 years coincided with a substantial increase in trade. In fact, trade openness and inequality are only weakly, and negatively, correlated (see Figure C.2(b)). This is in line with quantitative studies which suggest that trade does not necessarily increase inequality. For instance, tariff liberalization in developing economies could decrease inequality in some economies but increase it in others, with this increased inequality dwarfed by large average welfare gains (Artuç, Porto and Rijkers, 2019). Similarly, the larger benefits on low-income

consumers from tariff removal can, in some cases, more than offset wage losses, thereby reducing inequality (Ural Marchand, 2019). More recent disaggregated analysis for the United States suggests that the impact of trade differs more between households with similar income levels but differing characteristics, such as employment sector or location, than between high- and low-income households. As a result, the shape of the income distribution – a measure of income inequality – remains essentially unchanged in response to more trade, although trade can have very disparate effects on similar workers and, thus, create winners and losers (Borusyak and Jaravel, 2024).³

Figure C.2: Limited reduction in income inequality amidst greater trade openness



Source: Authors' calculations, based on World Inequality Database and World Bank data on trade openness.

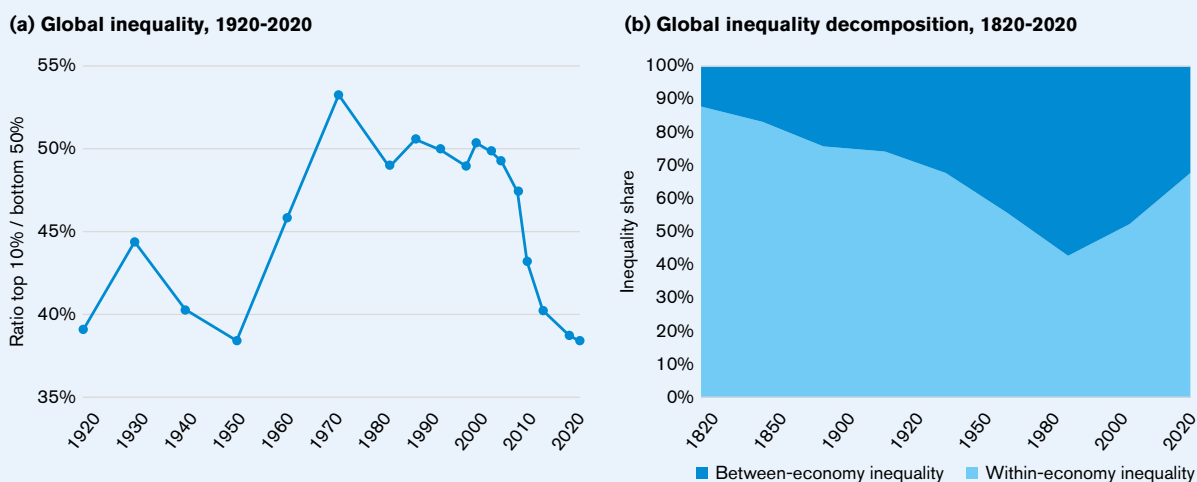
Note: Panel (a) shows the evolution of the average Gini index by income group over the period 1995-2022. Panel (b) shows the correlation between the Gini index and trade openness index. The Gini index is a measure of inequality, ranging from 0 for perfect equality to 1 for maximal inequality. The trade openness index corresponds to the share of exports and imports over GDP conditional on economy size. The analysis in panel (a) covers 167 economies, classified based on the World Bank's income group classification, with each economy assigned to the income group it spends the majority of years in. If an economy spends an equal number of years in two groups, the lower income group is chosen. The analysis in panel (b) covers 157 economies, classified based on the 2021 World Bank's income group classification.

Box C.1: Global inequality has fallen recently

Global inequality refers to the distribution of income among individuals worldwide, encompassing both within-country and between-country income differences. Hence, it covers both the concept of convergence (i.e., poorer economies catching up with richer ones in terms of income) discussed in Chapter B and the concept of inclusiveness that will be discussed in this chapter. A global perspective of inequality complements insights from the within-economy and between-economy analysis and allows specific regional income groups to be compared to the same global income group (Milanovic, 2016, 2006).

Global inequality has declined substantially over the past 30 years but remains high. It surged between 1960 and 1980 but since then has fallen back to levels seen prior to this surge (see Figure C.3(a)). This fall coincided with a rapid expansion of international trade that favoured the income convergence between developing and developed economies discussed in Chapter B. As a result, the between-country component of global inequality decreased from 57 per cent in 1980 to 32 per cent in 2020 (see Figure C.3(b)).

Figure C.3: High global inequality despite a significant decline



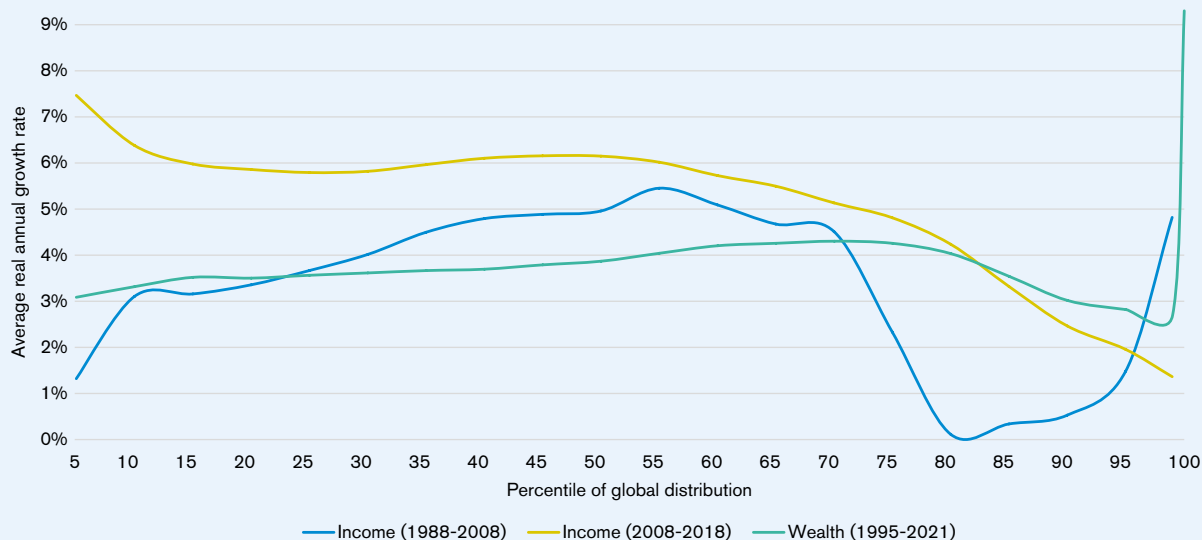
Source: Authors' calculations, based on Chancel et al. (2021) and Chancel and Piketty (2021).
Note: Panel (a) shows the evolution of the ratio between the incomes of the top 10% and the bottom 50% in global income over the period 1920-2020. Panel (b) shows the evolution of the global inequality decomposition into within-country and between-country components over the period 1820-2020.

Another way to depict global inequality is to look at income growth rates along the global income distribution. The evolution of global inequality between 1988 and 2008 followed a pattern commonly known as the “Elephant Curve” (Lakner and Milanovic, 2013). The global middle-income group, composed mostly of populations in Asia, and the top global 5 per cent experienced the largest real income growth over the period, while populations around the 80th and 90th percentiles, mainly comprising the middle or lower-middle classes from advanced economies, saw little to no real income growth (Lakner and Milanovic, 2013) (see Figure C.4). A more disaggregated analysis suggests that the shape of the “Elephant Curve” can, in part, be attributed to the collapse of incomes in former Soviet states following the breakup of the Soviet Union (Corlett, 2016).

More recent analysis points to a decrease in global inequality between 2008 and 2018, with slower growth for the top global 1 per cent, limited improvement for the 80th and 90th percentiles of the population, but significant growth for the poorest percentiles (Milanovic, 2024). However, in contrast to wealth inequality within economies, global wealth inequality has increased: 38 per cent of total wealth growth between 1995 and 2021 went to the top global 1 per cent (Chancel et al., 2021).

Box C.1: Global inequality has fallen recently (continued)

Figure C.4: Lower global income inequality amidst higher global wealth inequality, 1988-2021



Source: Authors' calculations, based on the World Bank Povcal Database and Luxembourg Income Survey and on the World Inequality Database.

Note: The figure displays growth incidence curves which measure how much income and net wealth have grown along the global population distribution. Net household wealth is the total amount of financial assets.

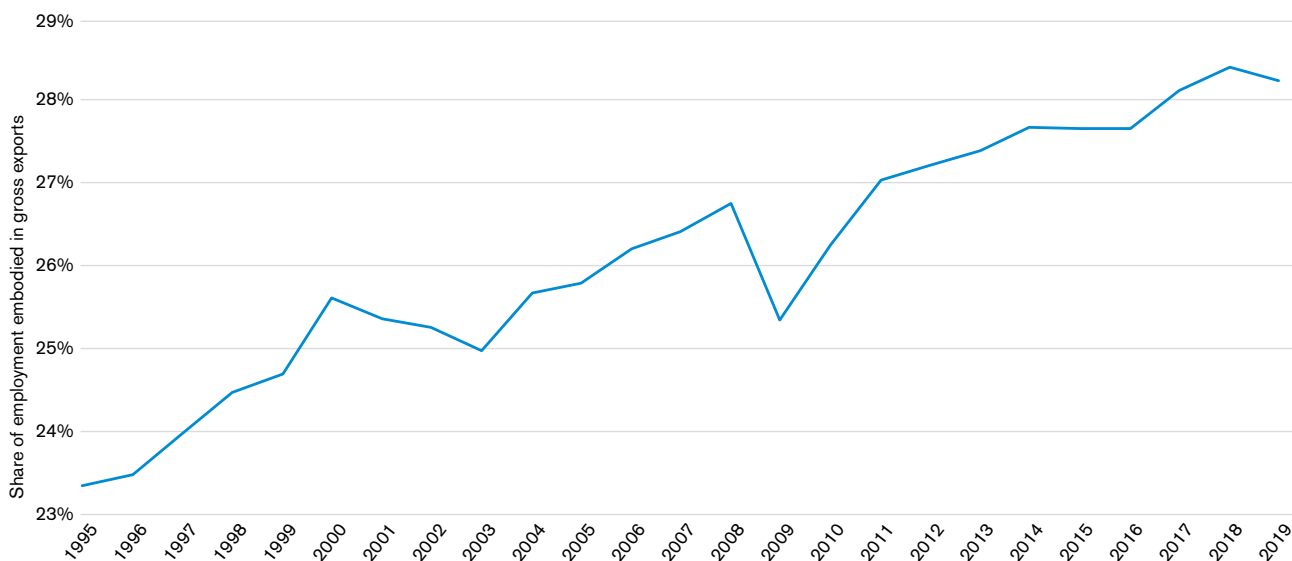
2. Most people gain from trade but some suffer losses

Most individuals gain from trade, but some suffer losses, especially if they are exposed to distortions and barriers that limit their adjustment or access to foreign markets. When aggregate gains from trade are not distributed equally, some see income gains, while others encounter losses. The rewards of trade flow mainly to workers in the most productive firms, sectors or regions. However, trade affects individuals not only as workers, but also as consumers, and the consumption benefits of trade flow disproportionately to households with relatively less income. Moreover, by shifting resources to their most productive uses, trade can create job opportunities, and these can benefit those initially affected negatively by resource shifts. However, this requires the ability to adjust, for instance through occupational, sectoral or geographical mobility. Factors that prevent such adjustment, referred to as distortions and barriers, and including issues like excessive market power or discriminatory norms, can limit access to trade and may disproportionately affect certain populations, such as unskilled workers, rural populations or some women.

(a) The distribution of the gains from trade among workers is unequal

Trade tends to raise incomes and growth, but many gains from trade depend on redistribution within economies, from relatively less to more productive firms, sectors or regions. In fact, from comparative advantage to scale and selection effects, the most influential sources behind the gains from trade all imply unequal outcomes within economies. As a result, trade benefits some more than others, and can even cause absolute income losses for workers who lose their jobs for trade-related reasons, and in the regions where such job losses occur. These distributional impacts of trade do not necessarily increase inequality, however, as they can benefit workers and regions that had relatively lower incomes. Further, the evidence presented in this subsection suggests that the majority of workers benefits. This is in line with descriptive evidence showing that trade accounts for a growing share of employment. For example, the average share of jobs dependent on exports across 61 economies with available data increased by over 20 per cent between 1995 and 2019, with the average share of jobs dependent on exports reaching 28 per cent in 2019 (see Figure C.5).

Figure C.5: Increasing share of employment embodied in exports, 1995-2019



Source: Authors' calculations, based on the OECD Trade in Employment database.

Note: The figure shows the evolution of the average share of employment embodied in gross exports as a percentage of total employment between 1995 and 2019. It includes both employment in exporting industries and, employment in other (upstream) domestic industries embodied in intermediate inputs used by exporting industries. The analysis covers 19 middle-income economies and 42 high-income economies. Due to the effects of the COVID-19 pandemic, the 2020 observation was omitted.

(i) Comparative advantage and offshoring lead to differential impacts of trade on workers

Specialization according to comparative advantage leads to gains from trade that are distributed unequally among workers or regions.

Comparative advantage arises due to differences in productivity across occupations or sectors which, in turn, can be driven by countless factors, from the availability of skilled workers to the quality of institutions. Trade allows economies to benefit from these differences by enabling them to specialize in the production of goods they are relatively good at producing, while importing goods that foreign economies are better at producing than they are. As a result, substantial wage gains occur in expanding sectors, while workers in contracting sectors experience a higher risk of job loss. This phenomenon often spills over to affect regional disparities, as sectors typically cluster regionally.

The impact of trade openness on workers varies depending on the industry and region in which they are employed. For instance, while overall welfare improved, US regions more specialized in manufacturing experienced a relative decline in income following a surge in trade with China, whereas regions more specialized in agriculture and services experienced relative income gains (Caliendo and Parro, 2023). Similarly, in Germany, areas hosting import-competing sectors, such as textiles, faced

relative employment losses, while areas dependent on comparative advantage sectors, such as automobiles, expanded after an increase in trade with China and Central Eastern Europe (Dauth, Findeisen and Suedekum, 2014). In Brazil, regions specialized in agriculture or mining gained from trade-opening, while regions with a higher manufacturing share incurred relative losses (Costa, Garred and Pessoa, 2016; Dix-Carneiro and Kovak, 2017). In South Africa, regions with employment in sectors that faced large tariff cuts experienced manufacturing employment losses relative to regions with sectors not subject to tariff cuts (Erten, Leight and Tregenna, 2019). In contrast, in China, regions that experienced the largest reductions in trade policy uncertainty following WTO accession saw increases in manufacturing employment and declining agricultural employment compared to other regions (Erten and Leight, 2021).

The impact of trade openness on workers also varies depending on their occupation and skillset.

The impact of trade openness on wages may be more pronounced through occupational exposure than through sectoral exposure (Basco et al., 2024; Ebenstein et al., 2014). For instance, increased import competition from China resulted in income losses primarily affecting low-wage workers in US import-competing sectors (Autor et al., 2014). It also led to reduced trade gains for medium-skilled workers with sector- and firm-specific skills in Germany (Dauth, Findeisen and Suedekum,

2014). In Indonesia, tariff cuts enabled firms to import more affordable and higher quality inputs, enhancing their competitiveness and increasing hires of low-skilled workers, effectively reducing inequality and poverty (Amiti and Davis, 2012; Kis-Katos and Sparrow, 2015). Similarly, the implementation of the US-Viet Nam cooperation trade agreement opened up new export opportunities in apparel and textiles for many Vietnamese firms, particularly benefitting younger workers with lower education levels, thereby reducing inequality. In general, trade and labour interact in a dynamic setting, constantly evolving in response to various economic and social factors. The labour effects of trade on individuals or regions can change over time when new industries gain comparative advantages (see Box C.2).

The substantial impact of trade on regional inequality is, to a relevant degree, the result of intra-regional spillovers. Much of the literature finds that trade shocks trickle down local economies through indirect, general equilibrium, effects. For instance, negative wage effects are not limited to import-competing sectors, but can be observed more broadly in hard-hit regions, most likely because job losses and wage cuts lower local demand (Autor, Dorn and Hanson, 2013; Hakobyan and McLaren, 2016; Dix-Carneiro and Kovak, 2017). Conversely, regional proximity to industries that are indirectly exposed to rising exports can contribute to a significant share of local employment expansion, driven by worker transitions between directly and indirectly exposed industries and knowledge spillovers (Helm, 2020).

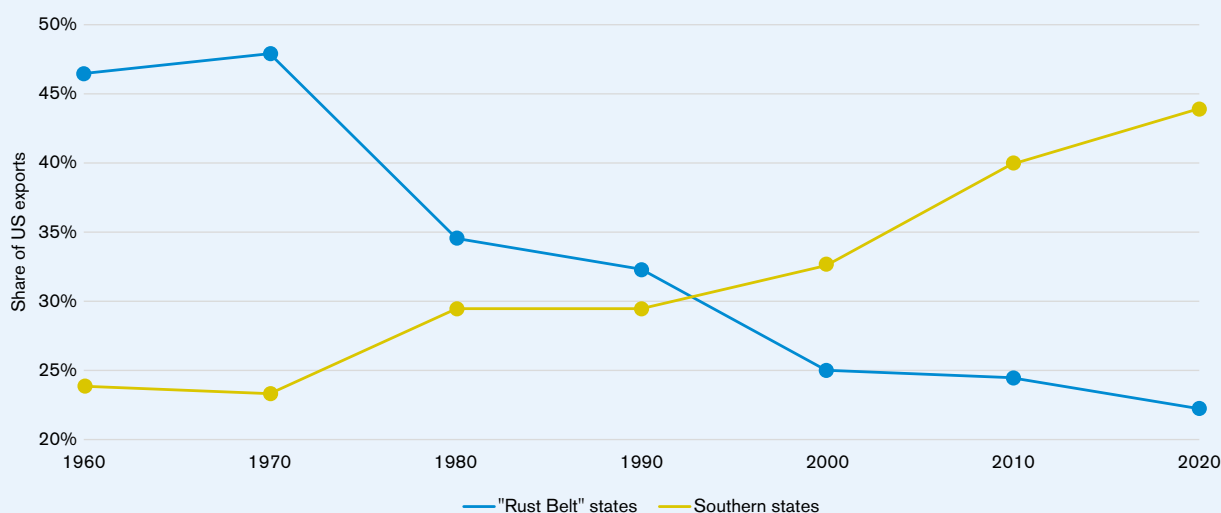
Box C.2: Winners from trade may change over time

Those who gain and those who lose out as a result of trade openness tend to change over time. Evidence suggests that one important source of gains from trade, comparative advantage, is highly dynamic. A study of 90 economies found that there is continuous turnover in an economy's export basket. In fact, 60 per cent of the goods that accounted for the top 5 per cent of those economies' current absolute advantage industries were not in the top 5 per cent two decades earlier (Hanson, Lind and Muendler, 2015).

A change in industry capabilities often translates to changes in regional capabilities. An example of this can be seen in Figure C.6, which shows how the spatial distribution of exports in the United States developed across two sets of states from 1960 until recently, with the Southern states gaining export shares at the expense of the so-called "Rust Belt" states.

The dynamics underlying comparative advantage and international trade suggest that complementary policies should be flexible, and not necessarily restricted to particular sectors or regions. Furthermore, impact assessments may be challenging because the exact causes of these dynamics are often unclear.

Figure C.6: US export shares by US state aggregates, 1960-2021



Source: Authors' calculations based on the US Census Bureau's Exports from Manufacturing Establishments reports.

Note: Data are from 1960, 1971, 1983, 1991, 2001, 2011 and 2021, starting with the earliest year with data availability for US state-level exports, then every 10 years subject to subsequent data availability. The "Rust Belt" states refer to Illinois, Indiana, Michigan, Missouri, New York, Ohio, Pennsylvania, West Virginia and Wisconsin. Southern states refer to Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Offshoring has been linked to increased wage inequality. The rise of global value chains (GVCs) and the associated offshoring can magnify the distributional effects of trade as it amplifies the role of comparative advantage. The spatial unbundling of production stages allows for comparative advantage to operate at the more disaggregated level of tasks, such as research or assembly, rather than goods. This implies an even stronger shift in labour demand towards the abundant factors of an economy with magnified distributional impacts (Baldwin, 2016). While, in theory, the productivity-enhancing effects of offshoring can offset the inequality increase (Grossman and Rossi-Hansberg, 2008), empirical evidence tends to show that offshoring does increase wage inequality, especially between routine and non-routine workers (Hummels, Munch and Xiang, 2018). This phenomenon also applies to the offshoring of services inputs (Crinò, 2010; Ariu et al., 2019).

Offshoring can also explain why trade is associated with an increase in the skills premium in some developing economies. Evidence from a set of mostly Latin American developing economies finds that trade-opening increased the skills premium, defined as the ratio between the wages of skilled and unskilled workers. This was argued to be in contradiction to traditional trade theory, which suggests that trade should raise incomes of the factor that is abundant in an economy. For developing economies, this was assumed to be low-skilled labour (Goldberg and Pavcnik, 2007). Offshoring could offer a possible explanation for this. As the same offshored tasks, such as assembly of mobile phones or back-office roles, may be considered not skill-intensive in developed economies but skill-intensive from the perspective of developing economies, skill premiums may increase everywhere due to offshoring (Feenstra and Hanson, 1996). However, much of this evidence on the increased skill premium in developing economies comes from middle-income economies, such as Colombia or Mexico. In contrast, studies on low-income economies, such as Viet Nam or Indonesia, observe decreasing wage inequality due to trade and offshoring, in line with traditional trade theory.

(ii) Selection, scale and agglomeration can increase wage inequality

Gains from trade arise not only from differences across sectors, but also because trade allows productive firms to expand and benefit from agglomeration externalities. These factors can give rise to intra-industry trade which has, nevertheless, implications for inequality. Economies of scale and the self-selection of the most productive firms into exporting increase differences between large and

small firms, which impacts individual inequality, given the different employment profiles of these firms. Agglomeration benefits some regions at the expense of others affecting spatial inequality. This is similar to the comparative advantage channel, but has clearer predictions for the rural-urban divide.

Large productive firms dominate exports and imports. Empirical evidence, supported by economic theory, confirm the important role of large productive firms in both exports and imports. For instance, in the United States, only about 18 per cent of firms exported and only 9 per cent imported in 2021. Of those, large firms, i.e. firms having more than 500 employees, accounted for more than two-thirds of export and import values (U.S. Census Bureau, 2023). In the European Union, importers with more than 250 employees made up only 2.8 per cent of the number of importing enterprises but accounted for 56.1 per cent of extra-EU imports in 2021. Large exporters made up 3.6 per cent of the number of exporting enterprises while accounting for 64.8 per cent of the value of exports (Eurostat, 2023). Similarly, in a sample of 32 low- and middle-income economies, the largest exporter alone accounts on average for about 14 per cent of a country's non-oil exports (Freund and Pierola, 2015).

Large firms tend also to respond better to import competition. For instance, a study on Mexican firms facing import competition from China found that smaller firms saw reduced sales and were more likely to shut down, while larger plants were relatively less affected by import competition. Moreover, large firms benefitted substantially more from access to cheaper Chinese inputs, resulting in increased sales and product survival. These factors caused market shares to shift to larger firms, benefitting the overall economy but negatively impacting workers in smaller firms (Iacovone, Rauch and Winters, 2013).

The concentration of trade within a few firms affects inequality because these firms tend to pay higher wages and hire more skilled employees. The average wages paid by exporting firms in developing economies range from 6 per cent to 35 per cent higher than wages paid by non-exporting firms (Bernard et al., 2007; Fariñas and Martín-Marcos, 2007; Baumgarten, 2013). Similarly, the average wage paid by exporting firms in low- and middle-income economies were estimated to be 31 per cent higher than other firms in the same industry (Brambilla, Depetris Chauvin and Porto, 2017). Some of this effect is driven by the fact that exporters typically also import, and that importing is equally associated with a large wage premium (Martins and Opromolla, 2011). A relevant part of the wage

premium arises because trading firms tend to employ more skilled employees and match employee skills better to tasks. As a result, trade raises wage inequality by increasing the skill premium (Helpman et al., 2016; Bombardini, Orefice and Tito, 2019).

Differences between import-competing and trading firms can raise not only the skill premium but also inequality between workers with similar skill levels. Trade cost reductions in emerging economies have been found to boost wages at exporting firms for both low- and high-skilled workers, but to decrease wages at import-competing firms. In addition, tariff cuts on inputs led to increased wages at importing firms relative to firms that only source domestically (Verhoogen, 2008; Amiti and Davis, 2012; Helpman et al., 2016). Variations in the quality of products produced by firms may also lead to trade affecting similar workers differently. Recent evidence finds that French firms, and hence their workers, producing more expensive footwear were less affected by import competition from low-cost economies than firms charging low prices (Piveteau and Smagghue, 2024). Offshoring can lead to inequality between similar workers as it allows some low-skilled workers in developing economies to access advanced technologies by working for subsidiaries of multinational enterprises (MNEs), which pay significant wage premia (Antràs, Garicano and Rossi-Hansberg, 2006; Baldwin and Robert-Nicoud, 2014).

Gender inequality can worsen disparities between workers with similar skill levels. Recent studies find that trading firms that require interactions across different time zones and long-distance travel reward employees perceived to be more flexible with regard to these requirements. This typically benefits men's career progression and wages. Studies on Norway and South Africa suggest that the gender wage gap in exporting firms is about 2-3 percentage points larger than in non-trading firms once worker characteristics are controlled for. In the case of Norway, this difference arises only among highly skilled men and women, as the flexibility requirements are particularly pronounced among managers (Bøler, Javorcik and Ulltveit-Moe, 2018; Janse van Rensburg et al., 2020).

Spatial inequality can also rise when exporting plants are located in only a few areas within an economy. Exporting activity tends to be heavily concentrated in larger cities (Garcia Marin et al., 2020). A study on four middle- and high-income economies found that this spatial concentration is due primarily to variation within industries, rather than differences

between industries. The variation within industries is driven by more productive firms which are more likely to pay higher wages and to locate in large cities. As a result, trade widens urban-rural wage inequality. However, higher wage inequality does not necessarily translate into higher welfare inequality, when prices in larger cities are higher than in rural areas (Bakker et al., 2024).

(iii) Trade affects not only employment and wages but also job quality

Trade can help to improve working conditions. Despite occasional news reports of abusive working conditions in specific exporting firms, empirical evidence suggests that, on average, foreign-owned and exporting firms tend to have better working conditions than domestic firms in developing economies. In addition to higher wages, MNEs and exporters provide more formal job opportunities and can improve various working conditions, such as occupational safety and health provisions (Park, Lundquist and Stolzenburg, 2023). These effects can be magnified through supply chains as some MNEs, motivated by consumer demand for sustainable products and pressure by non-governmental organizations, put pressure on their suppliers to enforce labour standards. This is often achieved through relational sourcing contracts, which provide financial incentives to compliant suppliers, and contract termination clauses in case of non-compliance (see Chapter D.3 and Box D.3).

Trade can contribute to reduce child labour by fostering economic conditions where families are less dependent on children's earnings. The prevalence of child labour not only deprives children of their childhood and education but also perpetuates a cycle of poverty, hindering long-term economic development. Trade can significantly reduce child labour by increasing incomes and lowering prices. This enables families to provide for their children's necessities and education without depending on child labour for additional income. Additionally, as economies grow and diversify through trade, employment opportunities for adults can improve, further reducing the economic necessity for child labour (Edmonds and Pavcnik, 2004; Ugarte, Olarreaga and Saiovici, 2023).

(iv) The overall impact of trade on individual workers is complex

The net impact of trade on individual workers is a combination of the impacts of import competition, access to foreign inputs and export opportunities. These three channels all play out at different levels, including occupation, firm, sector and

region. This generates a large number of potential impacts that trade may have on workers with the net impact depending on which channels dominate. For instance, an individual worker might reside in an import-competing region but work for a large firm that sources a large share of inputs from abroad, with the result that the latter two channels might offset the first one.

The main implication of these multilayered effects of trade on workers is that they will be heterogeneous across economies and even across similar individuals. As a result, the labour market effects of trade do not consistently increase or decrease inequality at a more aggregated level. Studies on some economies find that trade has a significantly larger negative impact on low-income individuals through the labour market (Ural Marchand, 2019; Adão et al., 2022), while others observe a significantly larger positive effect on low-income individuals in other economies (Dix-Carneiro and Kovak, 2017). This is in line with recent work suggesting that the degree of occupational, sectoral and geographical exposure to trade is likely more important to worker outcomes than personal factors such as education and, by extension, income (Artuç, Chaudhuri and McLaren, 2010; Traiberman, 2019; Kim and Vogel, 2021; Costinot, Sarvimäki and Vogel, 2024).

However, initial exposure to trade is not the only factor determining the long-term effects of trade, as the ability to adjust is also important. Workers in firms confronted with heightened import competition may need to acquire new skills to remain competitive in the job market, explore opportunities in other growing sectors, or consider relocating to regions with more favourable job prospects (see Box C.3). Evidence from a grain import surge in Prussia around 1900 shows that persistent negative income effects on affected workers were avoided due to a strong labour mobility response towards other sectors and regions (Bräuer and Kersting, 2024). Recent findings indicate that job transitions resulting from access to cheaper foreign inputs can significantly contribute to individuals' wage growth. Conversely, involuntary job loss due to import competition can result in unemployment and compel workers to accept lower wages at new jobs (Arni et al., 2024). This emphasizes that the extent to which workers can adjust to trade shocks is critical, and this ability typically relates to factors such as education, income or gender.

(b) Trade benefits consumers, with a greater impact on lower-income households

Trade leads to substantial welfare gains by making a cheaper, more diverse set of products

available to consumers. Many economic models of international trade emphasize gains from consumption rather than gains from labour market effects. This makes sense in that the consumption effects of trade affect a much larger share of the population than the labour market effects. Despite this, trade policy in some economies is centred around the effects of trade on workers, on the basis that individuals are not just consumers, but also workers. However, such a focus ignores the fact that a substantial share of individuals do not work, for instance because they have retired or are too young. Moreover, a large share of workers in economies at all income levels, but particularly in high-income economies with large public services sectors, do not face import competition. In fact, based on data by the Organisation for Economic Co-operation and Development (OECD), the average population share affected by import competition was only 1.85 per cent in 2019 for the 14 most populous economies covered in the database (see Figure C.7), and has hardly changed relative to 1995. In smaller economies, this figure was slightly larger: the average across all 58 economies in the database was – a still limited – 5.89 per cent. As a result, the positive consumption effects of trade, even for most workers, are likely to directly impact a larger number of people than the labour market effects.

Trade's large welfare gains through consumption have substantial redistributive effects and can counter inequality-increasing effects on the labour market. Only recently, research examined to what extent the consumption effects of trade impact individuals, and therefore inequality, differently. This research highlights two channels in particular, that both imply larger welfare gains for low-income households: non-homothetic preferences (i.e., income- or wealth-dependent consumption patterns) and heterogeneous price elasticities. The first of these channels operates through lower-income households spending a larger share of their income on imported products, thereby benefitting more from trade. The second channel operates through lower-income households being more sensitive to price changes and, therefore, benefitting more from trade-induced price reductions.

Consumers in low-income households tend to benefit more from trade openness. Due to their relative higher spending on imported products, poor households are estimated to experience approximately twice the consumption-related gains from trade compared to rich households, which tend to consume more non-traded services (Fajgelbaum and Khandelwal, 2016). An increase in trade costs may therefore have a greater impact on the purchasing power of low-income consumers. For instance, the United Kingdom's exit

Box C.3: Putting studies on import competition shocks in context

The limited impact of trade on inequality, as discussed in this chapter, is not in contradiction with evidence on relative regional and individual losses from international trade. The literature illustrates that import competition shocks can lead to negative income effects for those affected relative to unaffected workers or regions. From impacts on poverty to informal employment to manufacturing employment, the literature shows that increased import competition can cause substantial local labour market disruptions (Topalova, 2007; Autor, Dorn and Hanson, 2013; Dix-Carneiro and Kovak, 2017).

However, by focusing on import competition, often from a single trade partner, such studies fail to account for the multitude of channels through which trade affects individuals and regions, including export opportunities, access to cheaper inputs and lower consumption prices. For example, there is evidence for a large sample of economies that improvements in market access increase sector-level wages (Olarreaga, Piermartini and Porto, 2020). By the same token, McCaig (2011) finds that provinces in Viet Nam that benefited from larger tariff cuts in US markets following the implementation of the US-Viet Nam cooperation trade agreement experienced greater declines in poverty rates. Since these channels often operate in opposite directions, inequality impacts might appear starker. For example, when the United States was faced with increased import competition from China, even upper-bound academic estimates are small relative to the overall turnover in the labour market of an economy the size of the United States. For instance, a crude comparison of the 2.4 million layoffs resulting from Chinese import competition from 1999 to 2011, estimated by Acemoglu et al. (2016), and the roughly 2 million monthly layoffs in the US non-farm sector over the same period, reported by the US Bureau of Labor Statistics, would amount to a contribution of trade to less than 1 per cent of total layoffs over that period.

Other studies that assess the broader effects of Chinese import competition, including the expansion in construction and services employment due to imported cost-effective inputs, report relatively minor negative or even positive effects of greater import competition on net job creation. Even when specifically examining manufacturing employment, these studies find relatively small absolute effects due to offsetting factors (Feenstra and Sasahara, 2018; Caliendo, Dvorkin and Parro, 2019).

The relatively small estimates of labour impacts from import competition are in line with theoretical and empirical evidence on the role of trade for employment (Bacchetta and Stolzenburg, 2019). If labour market distortions, such as imbalances between skills offered and required in the labour market, are sector-specific, trade can affect aggregate unemployment by reallocating resources across sectors. However, these effects are relatively less significant compared to the underlying distortions driving unemployment. Accordingly, empirical studies find small positive effects of trade-opening on employment. For instance, a 10-percentage point increase in total trade openness was found to reduce aggregate unemployment in high-income economies by about three-quarters of one percentage point (Felbermayr, Prat and Schmerer, 2011).

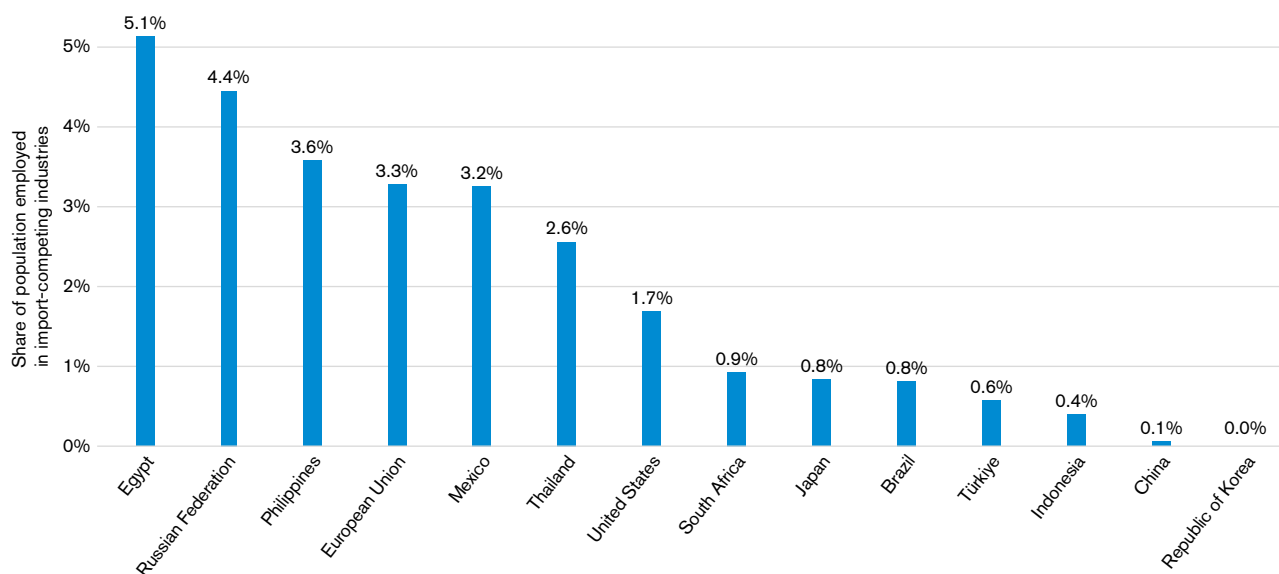
Hence, the import competition literature is complementary to the more comprehensive studies cited in this chapter. Moreover, even small aggregate effects can be highly disruptive if they are concentrated among few sectors or regions and last for extended periods. Several economy-specific factors, such as informality or market power, mediate the impacts of trade and make it harder for some individuals to adapt to import competition or access new export opportunities. Not accounting for these factors might lead to an underestimation of the distributional implications of trade.

from the EU single market and customs union resulted in a 6 per cent increase in food prices, which increased the cost of living of the poorest households by 52 per cent higher compared to the richest households (Bakker et al., 2022). Across the wealth distribution, differences in consumption can be even starker. For instance, US lowest-income households experienced

welfare gains 57 per cent larger than the US highest-income households after China's accession to the WTO in 2001 (Carroll and Hur, 2020).

The impact of trade on consumers is in part determined by the type of products traded and the trading partners involved. More detailed data provides more complex findings on how progressive

Figure C.7: Relatively limited share of workers in import-competing industries, 2019



Source: Authors' calculations, based on OECD Trade in Value Added (TIVA) and Trade in Employment databases.

Note: The figure shows the employment share in import-competing industries for selected economies with large population and available data in 2019. Import-competing industries are defined as those with gross imports exceeding 15 per cent of output, representing the top 25 per cent of industries in terms of import penetration in the database.

the effects of trade opening through consumption are. Recent studies have found that US consumption patterns, which may be representative of other high-income economies, are less varied along the income distribution than aggregate data suggests, since high-income households consume more imported varieties within sectors (Borusyak and Jaravel, 2021). As a result, consumption gains from trade may have no income bias in the United States. However, disaggregating the data even further shows that the origins of the imports matter. The imports from high-income economies are more significant in the consumption of high-income households. In contrast, the import expenditure share of low-income households in the United States is larger for imports from low-income economies, particularly China (Jaccard, 2023). Similarly, direct-to-consumer US imports from China, which are exempted from tariffs under so-called “de minimis” rules,⁴ are predominantly shipped to low-income regions in the United States, disproportionately benefiting poorer households (Fajgelbaum and Khandelwal, 2024).

Consumption gains from trade tend to favour the poorer segments of the population in developing economies more. Trade-opening has been found to lower prices particularly for goods consumed by poorer households in some emerging economies (Ural Marchand, 2012). Low-income households in developing economies benefit disproportionately from

trade-opening because they spend a larger share of their budget on food items, which are subject to comparatively high tariffs (Artuç, Porto and Rijkers, 2019). However, for households relying on the sale of agricultural goods for their income, lower consumption prices may not necessarily make up for the loss of income caused by the removal of tariff protection (Nicita, Olarreaga and Porto, 2014).

Consumption gains from trade may be pro-poor not only because of different consumption patterns, but because low-income households are more sensitive to price changes. Recent studies suggest that lower-income households are more likely to switch to more affordable goods compared to higher-income households when import prices decrease. For instance, in Switzerland, a sudden decrease in import prices was shown to increase welfare for lower-income households by about 30 per cent more than higher-income households, because lower-income households adjusted their expenditure more (Auer et al., 2024). Similarly, the poorest US households would gain four and a half times more than the richest households from a 10 per cent reduction in US import costs due to higher price sensitivities (Waugh, 2023).

(c) Distortions and barriers can lead to concentrated losses for some individuals

The impact of trade on individuals is mediated by many factors that can lead to concentrated and

persistent losses for some individuals. Distortions and barriers, such as mobility costs, informality or market power, impede adjustments by preventing individuals from moving towards gains from trade. They also limit the reach of the gains from trade, for instance by impeding some groups from participating in trade. In fact, the exposure to some of these distortions is closely linked to education and income as well as to other regional or individual characteristics, such as where people live or the types of jobs they have. As a result, where distortions and barriers are prevalent, trade can aggravate existing inequalities in the absence of complementary policies.

(i) Distortions and barriers affecting the distributional impacts of trade are significant and varied

Evidence suggests that the combined impact of distortions and barriers can be large, even in high-income economies. While it is difficult to quantify the impact of each distortion, proxies for the aggregate effects can be derived from observing mobility across occupations, sectors and regions, or by assessing the length of adjustment periods. Such proxies show that the adaptation costs to trade shocks for import-competing workers are high, and that the gains from trade do not reach everyone. For instance, studies show that the cost for workers of switching sectors or occupations after trade shocks is equivalent to several times a worker's annual wage (Artuç, Chaudhuri and McLaren, 2010; Dix-Carneiro, 2014; Traiberman, 2019). While these costs matter everywhere, they are particularly pronounced in developing economies, where they are estimated to be, on average, 33 per cent higher than in high-income economies (Artuç, Lederman and Porto, 2015). Similarly, mobility across regions tends to be relatively low within many economies, and such internal migration does not, at least in the short run, respond significantly to trade shocks (Topalova, 2007; Hakobyan and McLaren, 2016; Erten, Leight and Tregenna, 2019; Autor, Dorn and Hanson, 2023). As a result, an economy's adaptation to trade-opening tends to be relatively slow. Adjustment in some economies can still be ongoing up to two decades after liberalization (Artuç, Chaudhuri and McLaren, 2010; Dix-Carneiro and Kovak, 2017; Autor, Dorn and Hanson, 2021).

A high degree of labour market informality hinders the adjustment to trade openness. Within low-income economies, informal labour constitutes 89 per cent of the overall employment landscape. Workers in the informal sector typically earn lower incomes compared to formal sector workers with similar

qualifications, and do not have the same benefits and protections as those in formal employment (ILO, 2023). Informality can slow down adjustment to trade shocks by locking in workers that fail to move towards more productive opportunities. For example, studies on Brazil and Mexico have found that the informal sector, which exhibits low entry barriers, absorbs workers after import shocks and that those workers remain in the informal sector for extended periods, rather than migrating to more productive regions or switching to formal employment in other sectors (Arias et al., 2018; Dix-Carneiro and Kovak, 2019). By allowing firms up to a certain size to operate without incurring formalization costs, informality also discourages productive firms from growing, for instance by capitalizing on export opportunities (Ulyssea, 2018; Dix-Carneiro et al., 2024). As a result, informality both reduces the gains from trade and prevents workers from moving towards the gains from trade.

High levels of market power enable firms not to pass lower costs on to workers and consumers, and also reduce the ability of workers to move towards opportunities. There is evidence that firms with market power do not reduce prices in line with costs savings when trade-opening lowers input costs, but rather increase their markups (De Loecker et al., 2016). In addition, a relevant share of trade-related costs savings is absorbed by intermediaries that operate in non-competitive environments. A number of studies on agricultural exports suggests that farmers' incomes would be substantially higher if exporting intermediaries behaved competitively (Dhingra and Tenreyro, 2020; Dragusanu, Montero and Nunn, 2022). Evidence from Kenya, Nigeria and Ethiopia finds that intermediaries capture most of the surplus of falling world prices rather than passing it on to consumers (Atkin and Donaldson, 2015; Bergquist and Dinerstein, 2020).

Market power matters not only in product markets but also in labour markets. This especially affects developing economies, where employer concentration is particularly high (Armangue-Jubert, Guner and Ruggieri, 2024). Wage markdowns have been found to be largest for skilled workers in large firms, and this limits reallocation incentives towards these more productive firms (Castillo, Garcia-Marin and Tapia, 2023). The effects of trade on workers can differ based on the market structure and the market power of the firms involved in international trade. In labour markets with few employers relative to workers (i.e., monopsony or oligopsony), export profits do not always reach workers and, instead, raise profits of firms (Amodio, Medina and Morlacco, 2022;

Felix, 2022; Amodio and Roux, 2024). Some large exporting firms have been found to offer compensation in the form of local amenities, such as housing or schooling, instead of wages in order to reduce workers' mobility (Méndez and Van Patten, 2022). Trade may even worsen concentration in the labour market. For example, in the United States, import competition from China enabled the only employers in the local labour markets to leverage their market power and reduce wages (Benmelech, Bergman and Kim, 2018). This labour market concentration may have played a role in the declining share of income allocated to labour, although current evidence does not find a strong link between trade and labour share declines (Abdih and Danning, 2017; Karabarbounis, 2024).

The presence of state-owned enterprises (SOEs) can limit the reach of gains from trade. SOEs may limit competition-based gains from trade. For instance, some WTO accessions were found to reduce profits but increase productivity for private firms, while SOEs experienced no significant changes (Brandt et al., 2017; Baccini, Impullitti and Malesky, 2019). Evidence further shows that certain trade policy tools, such as licences, foreign direct investment restrictions or quotas, can be particularly distortive in the presence of SOEs or otherwise politically connected firms, as they tend to be the primary beneficiaries of such tools, which limits the expansion of more productive private firms (Khandelwal, Schott and Wei, 2013; Rijkers, Freund and Nucifora, 2017; Naidu, Robinson and Young, 2021). SOEs may also limit the pass-through of cost savings to consumer prices after tariff liberalization due to their lower sensitivity to costs (Han et al., 2016).

Underdeveloped capital markets can substantially reduce exports and prevent adjustment to trade shocks. Trade is more finance-intensive than domestic transaction because it requires capital for transportation, insurance and compliance with international regulations. As a result, underdeveloped financial markets reduce both the number of firms that export and their export values (Kohn, Leibovici and Szkup, 2016). These effects are not equal across firms, but are particularly severe for more financially constrained firms and firms operating in capital-intensive sectors, whereas foreign-owned firms are less affected, as they can access capital markets in several economies (Manova, 2013; Manova, Wei and Zhang, 2015). In addition, difficulties or obstacles for firms in reallocating capital across products or plants, for instance because of smaller firm or market sizes, or due to the absence of secondary markets, can slow down and distort adjustment. For example, a study on Peru found that when firms could

not reallocate capital, investments could not respond to market opportunities, which increased misallocation of investments and led to the exit of productive firms from the market (Lanteri, Medina and Tan, 2023).

Excessively restrictive labour market regulations may impede workers from moving towards more productive firms and sectors. Strict employment protection legislation can limit firms' ability to lay off workers in the short run in response to negative shocks, thereby supporting employment and private consumption. At the same time, strict employment legislation can also impede the wage adjustment process and workers' transition to more productive jobs, thereby delaying the labour and output adjustment to new economic conditions (WTO, 2017). Research has shown that stringent employment protection regulation slows down the pace of job reallocation, especially at large firms subject to more labour regulations and in sectors requiring labour adaptation (Haltiwanger, Scarpetta and Schweiger, 2014). High dismissal costs due to employment protection legislation were found to mitigate the unemployment effects of trade shocks but result in a low job reallocation rate, slowing down the adjustment to trade shocks and limiting the expansion of productive firms (Kambourov, 2009; Ruggieri, 2022). Internal migration restrictions also impose a cost on adjusting to trade or other shocks. For instance, internal migration restrictions in China were found to reduce the welfare gains from trade-opening by 2 per cent (Zi, 2018). Capital market frictions and obstacles can also magnify the effects of labour market frictions on the distribution of the gains from trade by hindering the wage adjustment process (Artaç, Brambilla and Porto, 2022).

Barriers to access to education reduce adjustment to trade shocks. Retraining workers to facilitate adaptation to a changing economic environment could provide one solution to low labour mobility. Barriers to education, such as distance or cost, have been shown to limit the adaptability of regions. Cities close to colleges or universities respond better to the long-term decline of industries that provide the majority of local employment (Gagliardi, Moretti and Serafinelli, 2023). While young individuals in exposed regions are more likely to enrol in college, those from low-income households have significantly lower enrolment rates compared to those from wealthier households (Ferriere, Navarro and Reyes-Heróles, 2023).

Weak institutions also lower the gains from trade since inefficient contracting arrangements reduce exports and imports. Importers from economies with weak institutions are more often

required to use costly payment terms, like cash in advance, which limits consumption gains from trade (Antràs and Foley, 2015). One way to overcome contractual frictions is via the use of relational contracts, which rely on past experiences between buyer and seller and the expected future value of this relationship. However, these arrangements can also be costly. Trade between partners in the early stages of a buyer-supplier relationship can be inefficiently low until sufficient trust is built (Brugués, 2023). Exporters may be willing to forego a substantial share of their profits when spot market prices surge, in order to serve relational buyers at fixed prices (Macchiavello and Morjaria, 2015). Managers may assign highly productive workers to serve foreign buyers with which firms have relational contracts, as a means of protecting the relationship, even if these workers would provide more value elsewhere (Adhvaryu et al., 2020).

High internal trade costs mute the impact of trade on prices and limit access to export opportunities. A lack of infrastructure or an efficient logistics sector can cause domestic shipping costs to exceed international shipping costs. This hurts both consumers and workers in regions dependent on domestic shipping. In fact, the lack of pass-through from falling world prices to regions within an economy is not just due to intermediary market power, but also due to high internal trade costs (Atkin and Donaldson, 2015). In addition, underdeveloped infrastructure reduces the number of people that move towards locations specialized in comparative advantage sectors (Fajgelbaum and Redding, 2022). In line with these different effects, improvements in domestic infrastructure have been shown to spread the gains from trade more widely in different settings (Donaldson, 2015; Redding and Turner, 2015). Moreover, in the case of border regions, trade liberalization with neighbouring economies can help remote regions by moving them from the periphery to the centre of expanding bilateral trade (Bonadio et al., 2023).

High degrees of regional concentration impede adjustment to trade shocks. Given how domestic barriers affect internal migration, more specialized local labour markets may struggle to adjust to import competition. Cities highly dependent on a single sector were found to respond substantially worse to the decline of that sector compared to more diversified cities in several high-income economies (Gagliardi, Moretti and Serafinelli, 2023; Helblich et al., 2023). Effects have been particularly strong in the cities in the so-called Rust Belt of the United States, pointing to geographical distance as a potentially relevant factor. Meanwhile, workers in regions dependent on

specific industries, whose skills are not transferable, suffer much larger earnings losses than workers in less industry-specific regions after a rise in import competition (Yi, Mueller and Stegmaier, 2024).

Barriers to the flow of information reduce trade and limit price declines. A lack of information about products or prices in different sectors or regions can significantly hinder the adjustment and the reach of gains from trade. Information frictions in some developing economies were estimated to account for 50 per cent of the price dispersion across markets, representing two thirds of the size of regulatory and physical trade costs (Allen, 2014; Startz, 2017). Several studies have found that the introduction of new technologies allowed producers to better match supply to demand in other markets and increase domestic or international trade (Jensen, 2007; Juhász and Steinwender, 2018). Increasing the availability of price information can further reduce price dispersion (Aker, 2010; Steinwender, 2018).

Barriers to the flow of information about new job and export opportunities and about regulations in export markets can hinder export growth. Workers need information about new job opportunities to make informed decisions about their career advancement and skills development. Research indicates that individuals strongly underestimate the potential returns from both migration and education, and are therefore reluctant to move or to obtain skills that are required by exporters. Simple interventions targeting these information gaps have been shown to substantially increase the likelihood that workers in some middle-income economies will access trade-related opportunities (Jensen, 2012; Baseler, 2023). Meanwhile, domestic firms wishing to participate in international trade need to gather essential information, including about export market regulations, market potential for their products, and the availability and reliability of foreign importers. However, this process can be significantly slow and costly, and can impede or delay the adjustment to trade-opening by slowing the expansion of the most productive firms to export markets, and the entry and exit of less productive firms (Eaton et al., 2021). This delay explains why the dynamic gains from trade openness are larger than the static gains (Alessandria, Choi and Ruhl, 2021).

Norms, habits, or local identities can further hamper the adjustment process to trade openness. Cultural factors, such as family structure, social capital, and ethnic and racial diversity, play a significant role in determining economic mobility (Chetty et al., 2014). Rigid social structures can

shape individuals' mobility towards specific economic opportunities, affecting their educational and geographical choices (Munshi and Rosenzweig, 2006, 2016). Strong local identity can also limit occupational and geographical mobility (Munshi and Wilson, 2008). Limited economic mobility often results in missed job opportunities, as individuals may be unable to move to areas or sectors with better employment prospects, thereby constraining the potential gains from trade openness.

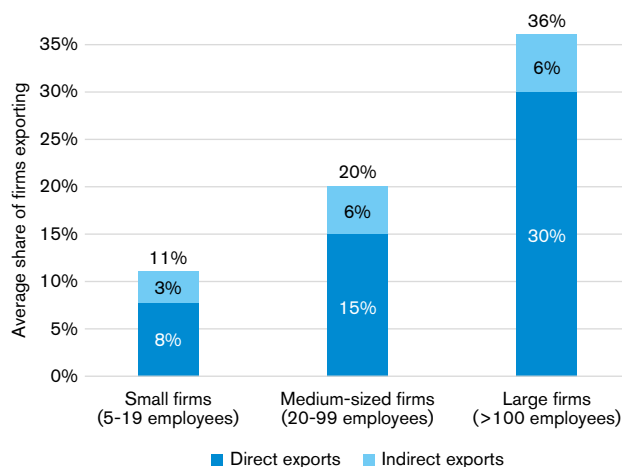
(ii) Distortions and barriers disproportionately affect certain groups

Distortions and barriers matter for inclusiveness because certain groups are particularly exposed to their detrimental effects. Aggregate statistics might fail to capture important trends at a more disaggregate level, such as disparities between local areas or social groups. For instance, certain groups are disproportionately less likely to benefit from poverty reduction. As of 2024, 10 per cent of women globally still live in extreme poverty. Furthermore, the incidence of poverty can differ substantially across subnational regions, with rural areas, which are home to 84 per cent of the world's poor, being notoriously poorer than their urban counterparts (ILO, 2023). These underlying trends are important because they can help identify particular groups or areas that are less likely to benefit from trade or other sources of welfare gain, often because they are more affected by distortions and barriers. For instance, evidence shows consistently that four groups – women, micro, small and medium-sized enterprises (MSMEs), unskilled workers, and workers in rural or remote areas – have less access to gains from trade because of economy-wide frictions and their specific constraints to accessing international market or adjusting to trade shocks. While less evidence is available for other groups, such as indigenous peoples and other minorities, it is likely that similar channels limit their gains as well (see Box C.4).

(iii) Micro, small and medium-sized enterprises

Trade provides important opportunities to MSMEs, but barriers, such as limited access to capital, limit their capacity to export. According to the World Bank Enterprise Surveys,⁵ only 11 per cent of small firms, and 20 per cent of medium-sized firms, export, compared to 36 per cent of large firms, (see Figure C.8). MSMEs are less likely to trade than large firms. One reason for this is that they are less productive than large firms. However, MSMEs engaged in exporting activities can enhance their productivity and grow through learning effects and economies of scale. Understanding the issues that hinder MSMEs'

Figure C.8: Lower participation of MSMEs in international trade



Source: Authors' calculations, based on World Bank Enterprise Surveys.

Note: The figure displays the average share of firms exporting by firm size. Exporters are defined as firms with an export share of at least 10 per cent of total sales. Indirect exports correspond to products sold domestically to third party that exports products. The analysis covers all available economies, based on the latest year available for each economy. Figures have been rounded up to the nearest whole number.

participation to trade can prove very beneficial, given that, in a majority of economies, MSMEs account for a significant proportion of employment (WTO, 2016). The low participation of MSMEs in international trade is, in part, attributed to their heightened vulnerability to imperfect capital markets. MSMEs often encounter higher credit rationing, screening expenses and interest rates in comparison to larger corporations. They face significant credit constraints, with approximately half of their trade finance applications being declined, a stark contrast to the mere 7 per cent rejection rate experienced by MNEs (ADB et al., 2023; IFC and WTO, 2023). Evidence from West Africa suggests that MSMEs customarily pay higher interest rates than large corporate firms for trade finance. In Côte d'Ivoire and Senegal, large companies may be charged 4 to 5 per cent over the refinancing rates, while the corresponding premium for MSMEs stands at 7 to 9 per cent (IFC and WTO, 2022). This is particularly challenging given the costly conformity assessment procedures associated with regulations and standards in export markets (ITC, 2016). It also reinforces the negative effects of weak institutions, as they may require MSMEs engaged in trade to provide more upfront capital in transactions, for instance through costly payment terms such as cash in advance.

Obstacles to obtaining information and distributional costs are additional major barriers

Box C.4: Trade and indigenous peoples

Trade-related economic activities, such as mining or infrastructure development, can harm vulnerable populations, such as indigenous peoples, when domestic policies are ineffective in protecting indigenous peoples' land, self-governance and cultural rights, in preventing deforestation and its impacts on livelihoods, and in ensuring access to essential services, including clean water and health (UNCTAD, 2014; OHCHR, 2016; Ceddia, Gunter and Pazienza, 2019). Inadequate intellectual property protection of indigenous peoples' traditional knowledge also make them vulnerable to unauthorized use or misappropriation of that knowledge, leading to commercial losses and the erosion of their cultural heritage (Goff, 2021).

While information on the participation of indigenous businesses in trade is still limited, indigenous communities have relatively low involvement in international trade. Recent studies on indigenous business in Canada reveal that indigenous-owned MSMEs are underrepresented among exporting firms, with 7.2 per cent of indigenous-owned MSMEs exporting in 2020 compared the average Canadian MSME rate of 12.1 per cent (Canadian Council for Aboriginal Business and Global Affairs Canada, 2023; Global Affairs Canada, 2023). The limited participation of indigenous communities in international trade can be attributed to various factors. According to the Canadian survey, the top export obstacles identified by indigenous-owned MSMEs are remoteness issues (including distance to customers, transportation costs and brokerage fees), knowledge issues (such as a lack of knowledge of local languages and cultures, or limited awareness of potential export markets) and border obstacles (including tariffs, non-tariff barriers, import quotas, customs duties and border security issues). Digital technologies are an important enabler for indigenous businesses to export. The likelihood of an indigenous-owned MSME exporting is six times higher when it utilizes e-commerce.

for MSMEs wishing to export. MSMEs often report comparatively greater impediments to finding foreign trading partners and to assessing demand for their products abroad, as well as resulting from customs procedures or language barriers (WTO, 2016; 2024a). MSMEs are also more affected than larger firms by geographical remoteness, as logistical and distribution costs account for a much larger share of their total costs than for larger firms (WTO, 2016).

Even when MSMEs export, the market power of large firms can limit their gains from trade. MSMEs have, in most instances, substantially less bargaining power than MNEs in global supply chains. Some value chains are organized around lead firms that control a number of dependent suppliers – so-called “captive value chains” – in which small suppliers hold close to no bargaining power (Gereffi, Humphrey and Sturgeon, 2005). As a result of these market power asymmetries, small suppliers, such as of coffee and garments, often receive lower prices (Boudreau, Cajal-Grossi and Macchiavello, 2023).

(iv) Women

Gender income inequality is high even though there is a slow but steady decline globally. According to the World Inequality Database,⁶ women's share of pre-tax labour income marked a continuous increase in the last three decades, from an average of 27.1 per cent in 1995 to 30.3 per cent in 2019. While

a majority of regions saw a constant or slightly falling gender wage gap until 2019, recent estimates report a sharp rise in the post-pandemic years, showing that the pandemic hit female workers particularly hard (Edwards, 2020). The slow decline in gender income inequality causes absolute gender inequality to remain high. Only 16 per cent of the top 1 per cent of labour income earners are women (Piketty, Saez and Zucman, 2018). Women globally are under-represented in high-wage jobs, but over-represented in low-paying jobs (Ortiz-Ospina and Roser, 2023).

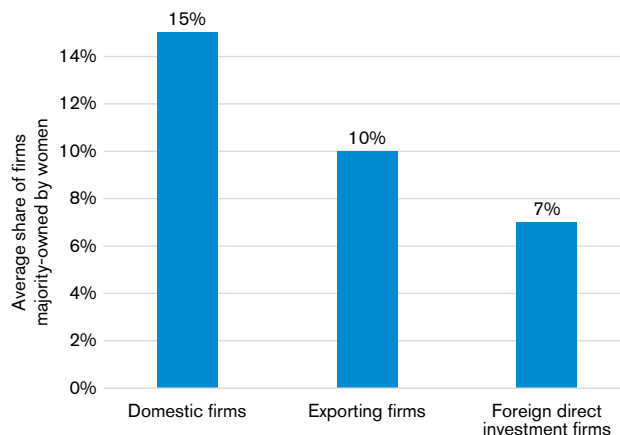
Trade is an important channel to boost female economic empowerment, but limited access to capital reduces their ability to trade. Companies involved in international trade tend to employ a relatively higher percentage of women. In developing nations, women comprise 33.2 per cent of the workforce in firms that engage in international trade, compared to 24.3 per cent in companies that do not export, and 28.1 per cent in those that do not import. In addition, women are more prevalent in companies participating in GVCs and in foreign-owned enterprises. Women make up 36.7 per cent of the workforce in GVC firms and 37.8 per cent in foreign-owned firms, which is 10.9 and 12.2 percentage points higher, respectively, than in non-GVC and domestically-owned companies (World Bank and WTO, 2020). There is a large literature that shows that women have less access to capital and

are particularly affected by imperfect capital markets. For instance, data from almost 10,000 firms surveyed in the Future of Business Survey⁷ reveal that only 12 per cent of businesses led by women had received a bank loan, in contrast to 20 per cent of those led by men. Women entrepreneurs are less likely than men to utilize bank loans, and they often receive smaller loan amounts with higher interest rates and stricter collateral requirements (OECD, 2023b). These differences are particularly stark in trade. Women-owned businesses face a 50 per cent higher rejection rate in traditional trade finance applications compared to those owned by men (DiCaprio, Kim and Beck, 2017). In a recent study on trade finance in the Mekong area, among the few banks that provided gender-disaggregated data 3 per cent was the highest share of the bank's total trade finance allocated to women-owned businesses (IFC and WTO, 2023).

Norms and barriers to information can further limit access to capital and cause other obstacles that reduce women's participation in trade. Strict credit requirements, combined with gender-based social, cultural and legal barriers, can hinder MSMEs owned by women from accessing more formal financing sources (ITC, 2015; IFC, 2021). For instance, norms in some economies prevent women from having access to collateral due to inheritance or ownership restrictions. Social norms can limit women's educational options and careers, as their available time may be restricted due to expectations that they will spend more time than men on childrearing or other domestic responsibilities. These factors affect how women adjust to economic changes and engage in trade (World Bank and WTO, 2020). Norms can also impact information access. Professional networks are important for obtaining relevant information on foreign markets, partners and distributors and, as women often have smaller and less extensive professional networks compared to men, this increases the hurdles that women tend to encounter when navigating both domestic customs procedures and foreign regulations (Korinek, Moïse and Tange, 2021; Sazedj and Tavares, 2022).

In light of these barriers, firms owned by women are less likely to engage in international trade and adjust to trade shocks less well, compared to firms owned by men. According to the World Bank Enterprise Surveys, only 7 per cent of firms with at least 10 per cent foreign ownership are owned by women, and only 10 per cent of exporting firms are owned by women, in contrast to 15 per cent of purely domestic firms (see Figure C.9). This is in line with the evidence that businesses owned by women tend to be smaller and, hence, face the same obstacles faced

Figure C.9: Lower participation of firms owned by women in international trade



Source: Authors' calculations, based on World Bank Enterprise Surveys.

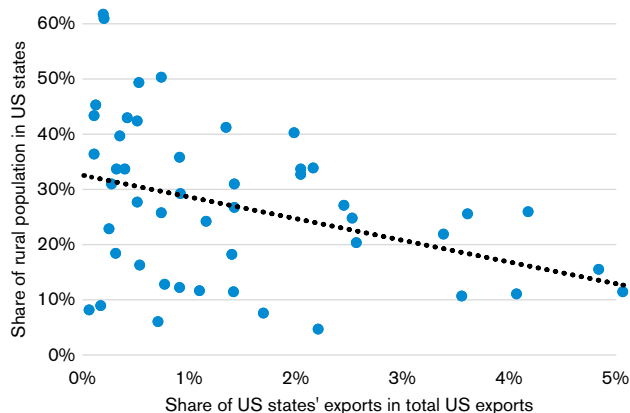
Note: The figure displays the average share of women-owned firms engaged in domestic and international trade and those with foreign direct investment participation. Exporters are defined as firms with an export share of at least 10 per cent of total sales. Foreign direct investment firms are those with at least 10 per cent foreign ownership. The analysis covers all available economies, based on the latest year available for each economy.

by MSMEs, as discussed above (World Bank and WTO, 2020). Female workers and business-owners also face specific mobility constraints that limit their ability to adjust to new job opportunities. Evidence suggests that while men and women may be equally mobile geographically, men are more likely to move for professional reasons, while women more often move for social reasons, such as for family reasons (Orkoh and Stolzenburg, 2020).

(v) Rural areas

Inequality between regions within an economy can be large, especially in trade. In 2016, real GDP per capita in regions of advanced economies at the 90th percentile was 70 per cent higher than that in regions at the 10th percentile (IMF, 2019). Most OECD economies have experienced a sustained increase in regional inequality (OECD, 2023a). Regional concentration in trade tends to be even stronger. Evidence from the United States shows a strong correlation between the population density of US states and their export shares (see Figure C.10). Similar patterns are observed in several other advanced and emerging economies when comparing city size and exports (Bakker et al., 2024). However, data from the Luxembourg Income Study⁸ suggest that some middle-income economies witnessed a significant increase in the ratio of rural to urban earnings, from 56.4 per cent in 2005 to 72.4 per cent in 2019. Regional disparities in emerging

Figure C.10: Lower participation of the US rural population in international trade



Source: Authors' calculations, based on US Census Bureau as reported by the National Bureau of Economic Research (NBER).
Note: The figure displays the correlation between the share of rural population in US states and the share of those US states' exports in the total US exports. Texas and California were omitted from the chart for readability with minor impact on the trendline.

economies have trended down since 2010, after rising in the early 2000s, with the average speed of regional convergence picking up to more than 1 per cent by 2016 (IMF, 2019).

Gains from trade in rural areas are negatively affected by underdeveloped infrastructure, information frictions and market power of intermediaries. Consumers in remote areas of developing economies have been found to benefit from only a small part of the gains that result from falling international trade barriers (Atkin and Donaldson, 2015). The pass-through from tariff reductions to prices is also lower in rural areas in emerging economies, with lower consumption gains in areas further away from ports or borders (Ural Marchand, 2012; Nicita, 2009). Even in high-income economies with lower intra-national trade costs, the differential incidence of consumption gains from trade between rural and urban areas appears to be large. A recent study suggests that the inhabitants of urban centres in the United States spend a much larger share of their expenditure on imports and, hence, would enjoy 16 to 26 per cent larger welfare gains from trade-opening than inhabitants of rural areas (Jaccard, 2023). Rural disparities can also contribute to missed trading opportunities. For instance, internal trade costs can prevent producers in rural areas from accessing markets that reward quality upgrading, keeping these producers locked in low quality production unsuitable for exports (Bold et al., 2022). Underdeveloped

infrastructure in rural areas can also aggravate information barriers. There is a persistent and sizeable digital divide between rural and urban areas (ITU, 2023a), which prevents rural firms from accessing information about export opportunities (World Bank and WTO, 2023b).

Workers in rural areas displaced by import competition face greater challenges in adapting due to limited regional economic diversity.

Economic activities in rural areas tend to be less diversified than in urban areas. For instance, larger metropolitan areas in the United States tend to have a wider variety of economic activities and industries than smaller areas (Duranton and Puga, 2000; Macheras and Stanley, 2017). Similarly, employment in rural areas in the European Union tends to be concentrated in a narrower range of economic activities (Eurostat, 2013). In developing economies, where rural areas rely to a large extent on agriculture, the lack of diversification is even more pronounced (ILO, 2019). The limited economic activities and possibilities for mobility in rural regions make it harder for rural residents to find new jobs or invest in new professional activities, which increases the adjustment difficulties they may face due to trade openness.

(vi) Unskilled workers

Wage inequality has been stagnant over the past decade, with recent data indicating a decline in some economies.

According to ILO data for 38 economies, the skills premium – the ratio of earnings of high-skilled relative to low-skilled workers – fell from 2.3 in 2010 to 2.2 in 2022, with the premium being highest in middle-income economies, followed by high- and low-income economies. A recent study finds that, following the COVID-19 pandemic, considerable wage growth at the lower end of the distribution offset approximately 38 per cent of the increase in US wage inequality since 1980 (Autor, Dube and McGrew, 2023). In Germany, the ratio of top-decile to bottom-decile incomes declined by 10 per cent between 2022 and 2023 (Federal Statistical Office of Germany, 2024). This recent stabilization of wage inequality has been preceded by a steady increase in the skills premium in the 1980s and 1990s (Katz and Autor, 1999).

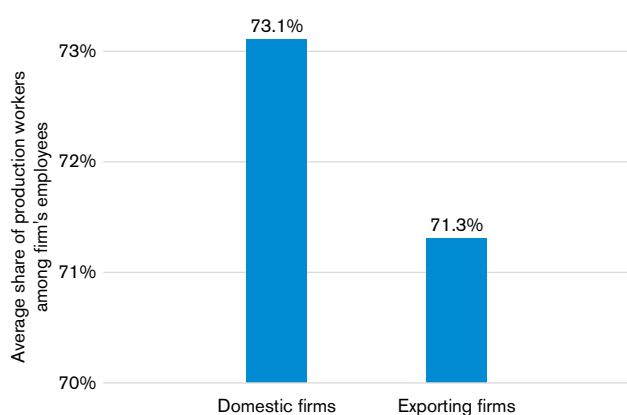
Exporters tend to have a larger skill premium, given that export trade is relatively skill-intensive, which limits the gains from trade for low-skilled workers.

Exporting firm have a larger demand for skills because export trade requires more managerial roles covering different tasks, such as managing foreign regulations or global distribution.

According to the World Bank Enterprise Surveys, exporting firms tend to employ a higher proportion of non-production workers, such as managers, lawyers and marketing or logistics specialists, compared to non-exporting firms. Conversely, exporting firms tend to employ a relatively lower proportion of low-skilled workers (see Figure C.11). The need for specialized expertise leads exporters to reward skills more than firms not involved in foreign sales, resulting in a larger skills premium for exporters (Brambilla et al., 2012; Burstein and Vogel, 2017; Madanizadeh, 2021).

Distortions and barriers, such as norms or informality, can aggravate the unequal access of low-skilled workers to gains from trade. While the education levels of unskilled workers are low by definition, norms and social factors often lead to a high degree of intergenerational persistence in educational outcomes (Chetty et al., 2014; van der Weide et al., 2024). This is also related to unequal access to education in economies where schooling is costly. Displaced unskilled workers from low-income households can lack the financial resources needed to acquire new skills and transition to sectors that are not affected by import competition (Ferriere, Navarro and Reyes-Heroles, 2023). Norms and social factors may also limit occupational choices, to the detriment of unskilled workers in economies with a large informal sector. Evidence shows that being unskilled is strongly correlated with working in the informal sector, which lacks access to export opportunities (OECD, 2024).

Figure C.11: Lower share of low-skilled workers in exporting firms



Source: Authors' calculations, based on World Bank Enterprise Surveys.

Note: The figure displays the average share of production workers in firms engaged in domestic and international trade. Exporters are defined as firms with an export share of at least 10 per cent of total sales. The analysis covers all available economies, based on the latest year available for each economy.

More restricted access to capital further limits the adjustment of unskilled workers to trade shocks.

There is a strong correlation between education and wealth (Pfeffer, 2018). Since adjustment to economic shocks like import competition often requires resources, such as financing periods of unemployment or retraining, this limits adjustment of unskilled workers, who usually have fewer financial resources. Differences in access to capital aggravate this relationship. Workers with lower levels of education and fewer skills tend to receive fewer job offers from distant locations and take longer to relocate after experiencing local disruptions. For instance, in the United States, 2 per cent of premature high school-leavers move states annually in the first year after leaving school, compared to 9 per cent of postgraduate degree-holders in the first year after completing their degree (Amior, 2024).

3. Fairer trade policies and domestic complementary policies are crucial to make trade more inclusive

Trade policies are often set at the economy-wide level, but their effects tend to be unequal across the population. Tariffs and non-tariff measures (NTMs), for instance, usually apply equally to all importers, independent of their size or location. However, this does not mean that their effects are identical for all. As consumption and employment differ across individuals, so does the impact of trade. As a result, setting trade policy in such a way that it does not inadvertently disadvantage certain groups is important to make trade more inclusive, although effects might be relatively small. Conversely, trade policy is sometimes set to shield certain groups from import competition; however, such interventions tend to impose significant costs on other parts of the economy and fail to reach their objectives.

Domestic distortions and barriers can lead to unequal effects from trade-opening, and domestic policies are required to address them.

Trade policy can make access to trade more inclusive, and it can also help reduce distortions and barriers. However, since these distortions and barriers are rooted in structural causes, they need to be addressed through domestic policies in order to support a more inclusive economy.

(a) Tariffs and NTMs have uneven effects on individuals

Tariff incidence across the population is unequal, with low-income households typically

facing higher tariffs on their consumption. The application of higher tariffs to products commonly used by low-income households and to lower-value varieties within the same product category significantly increases the tariff burden on lower-income households compared to higher-income households. As a result, the tariff burden of the poorest 10 per cent is about five times higher than that of the richest 10 per cent (Furman, Russ and Shambaugh, 2017; Acosta and Cox, 2024). A disproportionate burden of tariffs on low-income households has also been found in a large number of developing economies, mainly due to high tariffs on food items (Ural Marchand, 2012, 2019; Artuç, Porto and Rijkers, 2021). However, there are also progressive aspects of tariff schedules. For instance, in the United States, poorer households import a significantly higher volume of low-value goods that are exempt from tariffs under “de minimis” rules (Fajgelbaum and Khandelwal, 2024).

Tariffs tend to place a larger burden on women’s consumption than on that of men. Evidence across a broad set of economies finds that women, or households headed by women, pay relatively more tariffs, as they have a larger expenditure share on high-tariff items. For instance, households headed by women allocate a larger portion of their budget to agricultural products, which are often subject to high tariffs. This compresses their real income by 0.6 percentage points relative to households headed by men (Artuç et al., 2023). This gender disparity also applies to manufacturing products, including apparel (Gailes et al., 2018).

Temporary trade barriers and NTMs can reinforce the regressive impact of trade policy on consumption. Increased MFN tariffs, anti-dumping duties and safeguards measures on a number of consumption goods were found to increase their prices substantially. Since these goods were disproportionately consumed by low-income households in some emerging economies, these measures resulted in welfare losses among the poorest households that were twice as high as those of the richest households (Edwards et al., 2022).

The regressive nature of tariffs and NTMs is often linked to protecting specific groups of workers, but such protection tends to be ineffective. Many studies of a large number of economies have found that tariffs are higher, and NTMs more costly, in sectors that employ more low-wage workers or women, shielding them from import competition (Mendoza, Nayyar and Piermartini, 2018; Nicita, Olarreaga and Porto, 2014; Ural Marchand, 2019; Artuç, Porto and Rijkers, 2019;

Bekkers et al., 2024). However, such measures often fail to increase the welfare of the protected individuals when the employment impact of protective trade policy is offset by higher consumer prices and reduced consumption. Protective trade policy may also fail if tariff increases lead to retaliation by trading partners, thereby impacting negatively protected and non-protected sectors in the economy by limiting foreign market access (Fajgelbaum et al., 2020; Autor et al., 2024). For instance, the Smoot-Hawley Tariff Act of 1930 raised the average tariff rate on US dutiable imports by 19 percentage points, and this is estimated to have led to a 4 to 8 per cent decrease in import volumes. However, retaliatory tariff responses from other economies caused exports to drop by 28 to 32 per cent, resulting in significant welfare losses for all the economies involved (Irwin, 1998; Mitchener, O’Rourke and Wandschneider, 2022). Due to political and economic factors, protective trade policy can also create lock-in effects, causing tariffs to remain in place even when protected sectors no longer require protection, while continuing to place a higher burden on low-income households (Acosta and Cox, 2024). Some GVC settings can also make some restrictive trade policies, such as antidumping duties, less effective, as targeted firms can circumvent these trade restrictions by relocating production to alternative plants in non-targeted third markets (Flaen, Hortaçsu and Tintelnot, 2020).

Protective trade policy can raise costs in downstream sectors, which can more than offset the positive employment impact on protected industries. Restrictive trade policy on intermediates can increase input costs, making downstream sectors less competitive in third markets and thereby substantially reducing their exports (Flaen and Pierce, 2019; Handley, Kamal and Monarch, 2024). Women are likely to be more affected by this situation, as sectors with higher numbers of female employees face higher tariffs not only on their outputs, but also on their inputs, due to trade protection of their upstream sectors (World Bank and WTO, 2020; Bekkers et al., 2024).

While export restrictions are sometimes implemented to protect consumers, they often prove ineffective due to the potential for retaliatory responses. During crises, some governments may seek to protect consumers from shortages or higher prices by implementing export restrictions. Recently, WTO trade monitoring data showed, for instance, how the COVID-19 pandemic and the onset of the war in Ukraine led to sharp increases in export restrictions, often on food items (WTO, 2020a; 2023a). While such measures might

constrain prices in the short run, they tend to aggravate crises elsewhere and to reduce crisis preparedness at home in the mid- to long-term, as they reduce the incentives for producers to invest in capacity (WTO, 2021b; Bacchetta et al., 2024). For instance, export restrictions on food items can be contagious, leading net importing economies to take counteracting measures that drive up the global prices of food items, which undermines the original policy (Giordani, Rocha and Ruta, 2016).

Reforming trade policies to address biases in tariffs or NTMs can support inclusive trade. As discussed above, while the protective effects of tariff schedules and NTMs on domestic industries tend to be limited, these measures tend to disproportionately impact women, low-income households and MSMEs. Removing these biases can contribute to making trade more inclusive. For instance, improving agricultural market access to high-income markets significantly reduced poverty in rural areas of low- and middle-income economies (Porto, 2010; McCaig, 2011). At the aggregate level, rectifying trade policy biases tends to yield only small positive impacts on inclusiveness globally, as gains in equality in some economies may be offset by losses in others (Nicita, Olarreaga and Porto, 2014; Artuç, Porto and Rijkers, 2019; Bekkers et al., 2024).

Trade policy can also support inclusiveness by helping to address distortions and barriers that hinder equal participation. Trade costs may not only impose higher burdens on some groups, but may also indirectly amplify distortions and barriers. Lowering barriers to services trade is particularly important to make trade more inclusive. For instance, lowering barriers to trade in telecommunications and computer services can help to bridge the digital divide (World Bank and WTO, 2023a). Facilitating trade in financial services can also help to mitigate distortions associated with imperfect capital markets, including higher prices, reduced consumer choice and resource allocation inefficiencies, by boosting the productivity of firms that rely on these services (Arnold, Javorcik and Mattoo, 2011; Arnold et al., 2015). Trade-opening of high-skill services has also been shown to increase educational attainment, especially for girls, as high incomes in the sector lowered the relative cost of schooling and provided higher returns to education (Nano et al., 2021). Reducing services trade costs and implementing digitalization reforms could contribute to narrowing the gender wage gap (Bekkers et al., 2024).

Trade openness can help to address distortions linked to market structures. As discussed in

Section C.3(a), trade tends to reduce informality by increasing the number of formal job opportunities. This effect can substantially amplify the welfare gains from trade liberalization by reducing resource misallocation in economies with large informal markets (Dix-Carneiro et al., 2024). Trade can also help to address the issue of product market power. When tariffs are reduced, the heightened competition from abroad can compel firms to reduce their markups and consequently their prices (Lu and Yu, 2015; Brandt et al., 2017; Gonzalez-Garcia and Yang, 2020; Impullitti and Kazmi, 2022). Trade can also alleviate the distortions introduced by inefficient SOEs by shifting resources to private exporting firms, thereby magnifying the gains from trade (Khandelwal, Schott and Wei, 2013).

Trade-opening can alleviate the impact of some obstacles in markets for factors of production.

Trade has been found to substitute partially for financial development, and it reduces misallocation of resources across firms by raising the profits of the most productive firms (Finlay, 2024). Export profits can reduce the financial constraints of firms (Kohn, Leibovici and Szkup, 2016). GVCs are a key aspect of how trade reduces capital constraints in financially less developed markets. Some lead firms in GVCs were found to improve the liquidity of some financially constrained firms in the supply chain by providing financial support (Park, Lundquist and Stolzenburg, 2023). Export opportunities have also been found to incentivize local politicians to remove labour market barriers to internal migration (Tian, 2024). Trade can also contribute to institutional reforms that strengthen contracting institutions (Nunn and Trefler, 2014).

(b) Domestic policies are essential to make trade more inclusive

Making trade more inclusive is essential. The disparity between individuals who can effectively adjust to and prosper from trade openness, and those who cannot, poses a risk of widening inequality across social classes, regions, genders and age groups. Excessive inequality can be a hindrance within economies by impeding access to essential training and healthcare for the less fortunate or for the unemployed, thereby fuelling political tensions and potentially eroding support for trade openness (see the opinion piece by Stephanie Walter). The decision of whether and how to address inclusiveness rests with each government. While there is no “one size fits all” approach, economic growth, institutional reforms and sustainable debt management are important enablers to address inclusiveness. Improving resources mobilization is also an important factor for inclusiveness, especially in lower-income

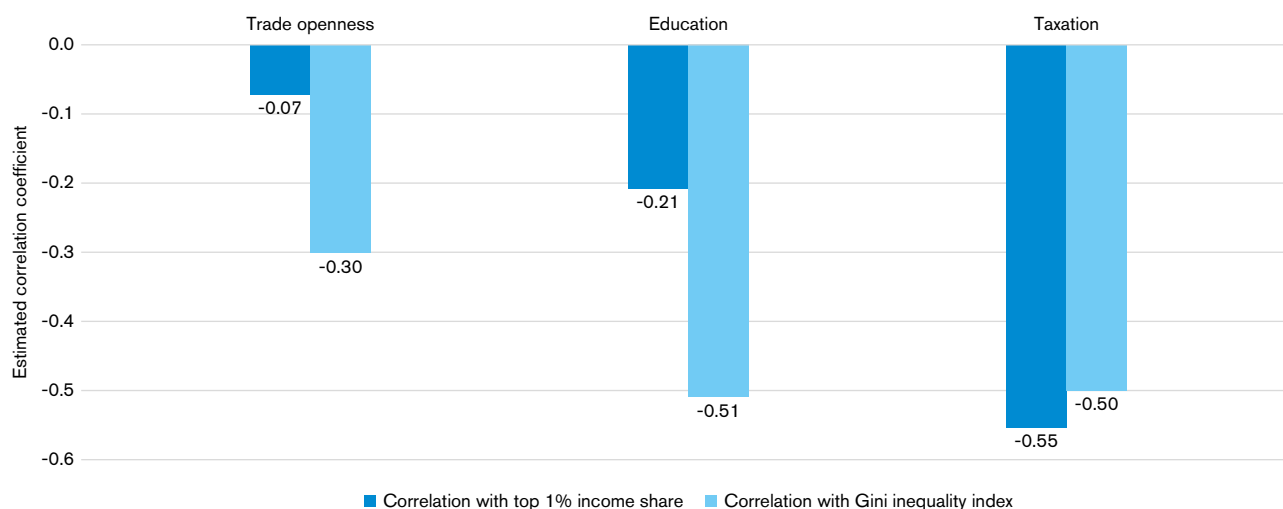
economies in which high external debt services and limited tax revenues significantly limit policy flexibilities.

Addressing inequality and promoting an inclusive economy require domestic policy reforms, rather than just trade policy reforms. Domestic policies to address inequality and inclusiveness encompass a broad range of measures aimed at reducing disparities in income and improving access to opportunities and resources among different social groups within the economy. Given the vast scope of these domestic policies, the following discussion focuses on a few select areas particularly relevant to the relationship between trade and inequality.⁹ Although trade policy reforms can contribute to inclusiveness, domestic policies play a key role in this endeavour, including by making trade work for all. Unlike trade policy reforms, which primarily impact international trade dynamics, domestic policies have a more comprehensive reach, affecting the fundamental aspects of an economy and society that contribute to inequality and inclusiveness, including education, taxation and social protection. For instance, the quality of education and effective tax rates show stronger negative correlations with different inequality measures than trade openness (see Figure C.12). Numerous studies point to the crucial role that providing equal access to education plays in reducing inequality (Chetty et al., 2020) and to the robust long-term correlation between taxation and reduced income inequality (Piketty, 2003; Piketty and Saez, 2003; Atkinson, Piketty and Saez, 2011; World Bank, 2022).

Passive labour market policies are critical to reduce negative local spillovers and to facilitate adjustment to trade shocks. Passive labour market policies, such as unemployment benefits and other income support schemes, can mitigate the negative income effects of trade shocks (Bacchetta, Milet and Monteiro, 2019). These policies can facilitate adjustment by allowing displaced workers to invest more time in finding the right job match, which can lead to higher long-term incomes for workers, and increased productivity for firms and the wider economy (Nekoei and Weber, 2017; Farooq, Kugler and Muratori, 2020). Concentrated income losses in a local labour market, even in the short term, can result in reduced local consumption expenditure, potentially leading to job losses in sectors not directly affected by the initial shock. Passive labour market policies can help to mitigate such negative expenditure spillovers. However, these policies are sometimes criticized as being insufficient, as they cannot compensate for the non-monetary value of jobs such as personal growth opportunities, flexible work arrangements and recognition (Young, 2012; Helliwell and Huang, 2014).

Active labour market policies can substantially accelerate adjustment to trade shocks. These policies operate through training or job search assistance, on-the-job training and direct job creation. Active labour market policies tend to increase the efficiency of the labour market by easing job searches and reducing the obstacles between workers and vacancies. For instance, wage insurance programmes,

Figure C.12: Stronger correlation between inequality and education or taxation than trade openness, 2022



Source: Authors' calculations, based on World Inequality Database, UN Comtrade, OECD PISA Database and OECD Tax Database.

Note: The figure displays the estimated correlation coefficients between trade openness, education quality or effective tax rates and two different measures of inequality, namely the Gini coefficient for income and the share of total income received by the 1 per cent highest income earners. The correlation coefficients were normalized to allow for a comparison across different variables that are measured in different units.

The complex interplay between inequality and attitudes about globalization

By Stefanie Walter

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It is often assumed that there is a strong link between inequality and attitudes to globalization, i.e., scepticism or openness to globalization. After all, trade and other forms of globalization have significant distributional effects, which suggests that those who are negatively affected are likely to be much more sceptical about globalization than those on the “winning” side.

Indeed, some of the biggest differences in views about globalization are related to inequalities in education and to regional economic inequality. Well-educated people, who tend to benefit the most from globalization, usually hold more positive views about it than people with lower levels of education (Menéndez González, Owen and Walter, 2023). And backlashes against globalization tend to be strongest in regions that have been negatively affected by economic shocks (such as trade or automation shocks). Support for populist and nationalist policies, parties and politicians tends to be higher in those regions (e.g., Colantone and Stanig, 2018; Milner, 2021).

Despite these trends, the relationship between inequality and globalization backlashes is less straightforward than it may initially appear.

First, popular backlash against political and socio-cultural globalization is often stronger than the backlash against economic globalization (Margalit, 2012). Many populist right-wing parties, for example, support free trade, but oppose international organizations, immigration and international rules that facilitate free trade but appear to constrain national sovereignty.

Second, although political actors opposed to globalization have become more vocal and powerful, there is little evidence that the public overall has become significantly more sceptical about economic globalization (Walter, 2021). Rather, savvy political actors have given globalization sceptics a much louder voice than they used to have in the past, so that globalization-related issues play a much more important role in domestic politics today than twenty years ago. Today, political competition is increasingly dominated by non-economic issues, such as national sovereignty, the environment, or immigration, that do not line up neatly on the traditional left-right political axis.

Third, the most vocal critics of globalization are usually not those individuals who have been hit hardest by globalization, but those who are worried about their economic and societal status going forward (Kurer, 2020). Such status anxiety is often caused by broad societal and economic transformations, including – but not limited to – transformations caused by globalization.

One of these structural changes is a decline in cross-country inequality. Several developing economies have been catching up with developed economies, and this is becoming increasingly visible to ordinary people in the developed economies, as these developing economies have started to export products that are globally competitive in areas that used to be the key comparative advantage of developed economies. These developing economies possess high-quality infrastructures that may be equal to, and sometimes better than, those of many Western countries. By hosting major sports events, like the Fédération Internationale de Football Association (FIFA) World Cup or the Olympics, these advances have become visible to the wider global public.

In these “rising” economies, many people see the current era – and globalization more generally – as an opportunity. These economies have also become more assertive at the international level, and are demanding more influence, to better reflect their growing economic weight and their priorities. In developed economies, however, these developments can amplify status anxiety, thereby providing both fodder for globalization-sceptical political actors and more negative views about globalization.

All of this suggests that, rather than shaping the views and the debate about globalization directly, the effects of inequality on people’s perceptions of globalization are conditioned by the economic, societal and political context in which they play out.

Disclaimer

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which provide additional income temporarily to displaced workers who are re-employed at a lower wage, can be effective policies to shorten the transition to reemployment (Dix-Carneiro, 2014). The analysis of a particular US wage insurance programme, designed for workers displaced by trade, shows that it effectively reduced unemployment and increased the cumulative earnings of eligible workers by subsidizing earnings when the new job paid less than the previous one (Hyman, Kovak and Leive, 2024). Positive effects on income and re-employment probabilities have also been found for on-the-job training support, job search assistance and re-employment bonuses (WTO, 2017).

Reforms of labour market institutions can shape the adjustment to trade shocks. Success in facilitating economic adjustment involves finding an appropriate balance between labour market flexibility and employment security. Reducing highly restrictive dismissal costs in parallel to trade-opening can facilitate the reallocation of workers and lead to substantially higher welfare gains. For instance, high firing costs in a rigid labour market were shown to slow intersectoral worker reallocation by 30 per cent, reducing gains in real output and labour productivity following trade-opening (Kambourov, 2009; Coşar, Guner and Tybout, 2016).

Addressing excessive market power can contribute to a fairer distribution of the gains from trade. In some economies, the increasing dominance of a few large firms has been a major contributor to rising inequality (Autor et al., 2020). This has prompted discussions and reforms related to competition policy, for instance with respect to large technology firms. In the context of international trade, there are often noticeable market power asymmetries between MNEs or intermediaries and small suppliers. For instance, in the coffee industry, large MNEs often dominate the market, controlling prices and terms of trade. Small coffee farmers in developing economies lack the market power and resources to negotiate better terms, resulting in significant income disparities. “Fair trade” certifications can address market power asymmetries by enhancing the bargaining power of producers in developing economies through improved access to markets, fair pricing practices, and social premiums for community development (Dragusanu, Montero and Nunn, 2022). Fair trade certifications have been found to boost farmer incomes by more than 30 per cent (Zavala, 2023). Quality certification programmes can serve a similar purpose by reducing the difference between final consumer prices and farmer incomes (Macchiavello and Miquel-Florensa, 2019; Rifin and Naully, 2020). Greater mutual

recognition, harmonization and transparency in sanitary and phytosanitary (SPS) measures and technical regulations can help to reduce anti-competitive practices by lowering entry barriers for exporters, fostering a level playing field and reducing the ability of dominant firms to use regulatory differences to their advantage (Fernandes, Lefebvre and Rocha, 2021).

4. Inclusive trade is set to undergo transformation amid emerging global trends

Trade is affected to a large extent by structural macroeconomic trends. These trends shape the overall economic environment in which trade occurs, including factors of production and the policy and regulatory framework. Looking ahead, there are three major developments that strongly affect both trade flows and within-economy inequality, namely the digital revolution, climate change and increasing geopolitical tensions. In affecting both trade and inequality, these trends also change the nature and dynamics of inclusive trade, and how it interacts with inequality.

Digitalization can democratize international trade by providing access and opportunities to more participants. Digital technologies can increase access to information, markets and services for traditionally underrepresented groups in trade, such as women, young people, and MSMEs (Pergelova et al., 2019). Digital trade, in particular, has allowed for direct business-to-consumer trade by MSMEs of smaller, lower-value shipments, and digital platforms have created the connections and audience required for international transactions (IMF, 2023). Women and young people also particularly benefit more from digital trade, as they face fewer barriers compared to physical transactions (World Bank and WTO, 2023b). For instance, more than 80 per cent of sellers in the e-commerce marketplace Etsy are women, and are twice as likely to be young adults (IMF et al., 2023). Digital industries, with their flexible locations, have contributed to changes in within-country migration patterns, prompting some remote workers to relocate from urban to rural areas, thereby distributing the gains from trade more widely (Bick et al., 2024).

Yet, a significant digital divide between and within economies remains, creating additional burdens and reducing trade opportunities. Although the share of the global population with internet access and mobile coverage continues to increase, significant differences remain, especially within developing economies, for example between urban and rural areas, between men and women, and

between large and small firms (ITU, 2023b; OECD, 2021). In addition, digital services tend to cluster in urban areas in which there are larger pools of highly skilled workers and established trade infrastructures; as a result, the benefits of digitalization are not accruing equally across regions (Nano and Stolzenburg, 2021; Springford, Tordoir and Resende Carvalho, 2024).

Socio-cultural differences can further reduce digital access for certain groups. For example, in many developing economies, women face greater digital exclusion (Rashid, 2016; ITU, 2023a). Further, while women in certain developing economies have mobile phones, they still lack smartphone access relative to men, which holds them back in terms of the access to the latest digital technologies (Blanchard, Gollin and Kirchberger, 2023). These differences have implications for within-country learning, health and economic resilience (Arisoy, 2022; Azzopardi-Muscat and Sørensen, 2019; Shah and Shah, 2023; WTO, 2021b). The COVID-19 pandemic highlighted the critical role of equitable access to digital technologies in maintaining schooling, access to health resources, and business operations. The pandemic changed perceptions of the internet, so that it is now considered to be an essential public service, which underscores the need for equitable and expanded access (Greig and Nelson, 2022).

An increasingly pressing issue for inequality linked to digitalization is labour replacement and disruption by artificial intelligence (AI). AI can have a positive impact on labour productivity, especially in smaller firms (Damioli, Van Roy and Vertesy, 2021), and it can facilitate trade through the automation of tasks, access to information, and other capabilities that might otherwise require costly outsourcing (Garg, Mahajan and Ghosh, 2022). However, while AI can support firm competitiveness and internationalization by increasing productivity and reducing costs, it also threatens to render a growing number of jobs obsolete, and this could impact inequality. Services jobs in which women are principally employed are potentially those most at risk (Acemoglu, 2024). Various studies highlight the threat of AI to employment in certain positions (Kim, 2019; Mesquita, Oliveira and Sequeira, 2021), particularly in white-collar jobs, including coding, accounting and research (Molla, 2023; Talmage-Rostron, 2024), all of which are digital services that are frequently traded by smaller enterprises (Kerner and Kitsing, 2023).

The future impact of digital trade on inclusiveness remains uncertain. Although digital trade offers opportunities for development and inclusiveness

(see Box C.5), access disparities in digital technologies could create challenges for equality and international trade participation, and AI-driven labour adjustments remain a potential concern. Ultimately, new digital technologies will continue to emerge, and it is important that all workers can use and access those technologies. As underscored in Section C.4, policymakers must focus on digital access, especially internet service provision, as well as education and training, are essential to ensure that all segments of populations can use new digital tools and services going forward.

Climate change is expected to impact international trade negatively, and to exacerbate within-economy inequality. Climate change has adverse effects on health and on access to drinking water, food and land, with significant trade-related impacts on agriculture, fishing and movements of people (Stern, 2007; WTO, 2022). Vulnerable groups, often residing in marginal areas with limited recovery capacity, face higher risk from climate-related hazards (Islam and Winkel, 2017). This exacerbates inequality, particularly affecting disadvantaged groups and women, due to differing task allocations. For example, due to societal norms in some areas, women may be more likely to undertake tasks like retrieving water, gathering firewood and subsistence farming, all of which are becoming more challenging due to climate change. Disadvantaged groups are especially vulnerable to market and price changes, given the volatility of food prices and the relatively higher share of income they already spend on nutrition. Indigenous peoples are also particularly vulnerable to climate change and trade-linked environmental impacts, such as deforestation, that threaten their access to land and natural resources (Abman and Lundberg, 2020; Jerez, 2021; Renglet, 2022).

The global shift towards renewable energy sources and sustainable practices has reshaped trade dynamics. This transformation has not only spurred innovation and investment, but has also opened new avenues for cross-border collaboration and trade partnerships. For instance, sustainable entrepreneurship has witnessed a significant surge in Europe, leading to the emergence of innovative green technologies and services that are increasingly in demand around the world (Crecente, Sarabia and Teresa Del Val, 2021). Similarly, climate change-induced challenges in regions like Nigeria have prompted the creation of new businesses focused on mitigation and adaptation activities, with potential for exportation of green products and expertise (Akuwudike, Mac-Ozigbo and Igbokwe-Ibeto, 2020). This trend is not only fostering economic growth, but is also contributing to

Box C.5: Microtech opportunities in developing economies

Short-term work by independent workers who use digital platforms to find employment, commonly referred to as microtech and digital gig work, are transforming livelihoods in internet-connected developing areas, offering new opportunities for young people, in particular, and potentially impacting migration patterns by creating more local work (Onkokame, Schoentgen and Gillwald, 2018). In many African economies, for instance, mobile internet-enabled devices and rural internet access points provide crucial connection to the digital economy, enabling workers to participate in microwork (i.e., small tasks undertaken online which contribute to a larger task or project) and earn income without leaving their communities.

The growth of AI has further driven demand for datasets created through microwork, providing new employment avenues for digitally connected individuals. This trend is evident in economies like Namibia, where digital microwork has become a viable livelihood strategy for those who face difficulties in accessing formal or stable employment opportunities (Keskinen et al., 2022).

However, this emerging sector faces significant challenges, such as the necessity for access to international payment systems. Local payment infrastructures are often fragmented and lack interoperability across borders, making it difficult for workers to receive their earnings (Onkokame, Schoentgen and Gillwald, 2018). Societal norms and infrastructure limitations create ongoing challenges to digital access by different demographic groups. This creates frictions and challenges to joining the digital labour market, leading to particularly low levels of digital labour in Africa (Onkokame, Schoentgen and Gillwald, 2018; Mothobi, 2021). Despite these issues, the potential for microwork to empower individuals in developing regions remains substantial, provided that supportive infrastructures and policies are in place to address these hurdles (Ngene, 2022).

While digital gig work offers flexibility and opportunities, it can also negatively impact the working conditions of some by creating job insecurity and unstable income, as it typically involves project-based, short-term contracts without long-term stability (ILO, 2021b). Gig workers often lack traditional employment benefits, such as health insurance, paid leave and retirement plans, making them more vulnerable in times of need. In addition, they may experience irregular work hours, which can affect their overall income and work-life balance. These challenges highlight the importance of regulatory frameworks to protect gig workers' rights.

resilience in communities vulnerable to the effects of climate change. As the transition to greener economies intensifies, the entrepreneurial landscape will continue to evolve, offering diverse opportunities for sustainable development and environmental stewardship.

International trade will play a pivotal role in mitigating the impacts of climate change while also addressing within-country inequality.

International trade will be needed to access resources following climate-related events, smooth cost spikes, and support innovation by entrepreneurs through knowledge transfers (WTO, 2021b; 2022). Initiatives like targeted investments in marginalized communities and capacity-building programmes can contribute to ensuring that the benefits of trade and climate action are more equitably distributed by enabling local businesses to participate in green supply chains. Removing trade barriers to climate-related goods and services can further improve access to the latest mitigation tools and technologies (Ouweland and Layton, 2021).

Geopolitical tensions disrupt trade and undermine inclusiveness efforts.

Fragmentation – i.e., the unwinding of trading relationships and the recourse to unilateral, rather than multilateral, policies – presents a major risk to progress in reducing poverty and inequality and particularly affects vulnerable groups, such as low-income households, women and MSMEs (WTO, 2023c). This reality has been exemplified by recent shocks, such as the COVID-19 pandemic and the ensuing price inflation, and persistent conflicts in the world, which have increased economic fragility. Disrupted infrastructure and logistics, exclusion from international markets or services like payment systems, and interrupted shipments or receipt of goods and services, are all relatively more challenging for smaller enterprises and those with less resources. Some decoupling strategies, such as reshoring through greater automation, may also disrupt labour markets in some sectors. While technological advancement in robotics and AI can facilitate the reshoring of some activities (typically in high-income economies), it can also

reduce the number of reshored jobs by making some imported inputs and tasks (typically those undertaken in developing economies) redundant and making automation more cost-effective (WTO, 2023c). Even outside of a specific geopolitical shock, the threat of such disruption is especially detrimental to more vulnerable populations, including some women, young people and the elderly (ITC, 2023). These challenges may be compounded by trade barriers arising from disrupted infrastructure, heightened corruption and severed business connections. Moreover, fragility disproportionately affects more unequal economies, and the escalation of inequality itself exacerbates fragility. By 2030, it is projected that two-thirds of the world's extreme poor will reside in fragile or conflict-impacted economies (Corral et al., 2020).

Overall, the digital revolution provides many opportunities for inclusive trade, but they also create challenges, which are aggravated by climate change and geopolitics. Overcoming the challenges to inclusive trade created by the digital divide, climate change and geopolitical uncertainty reinforces one of the key messages of this chapter: domestic policies are key to making trade inclusive. These include, for instance, broadening access to digital infrastructure, providing financial support, increasing access to credit for underserved populations, and promoting education and training. Trade policy can play a role in maximizing the opportunities of digitalization, for instance by improving market access through streamlined regulation and procedures. As discussed in Chapter D, international cooperation can help foster synergies for inclusiveness by aligning policies and resources to collectively address economic disparities and promote equal access to global trade benefits.

5. Conclusions

In the right policy environment, trade can deliver aggregate welfare gains and poverty reduction, and can support inclusiveness without necessarily raising inequality. This, indeed, has occurred in many economies, which aligns with recent studies showing that trade is not systematically linked with inequality. Rather, it is country-specific factors, such as which sectors exhibit comparative advantage, that have a greater influence on determining who benefits from trade and who faces losses from increased competition. Thus, trade may either increase or decrease inequality.

While a large majority of individuals gain from trade, a small share of the population encounters negative income effects from import competition.

Trade can provide new opportunities for those who have been negatively affected by import competition, but seizing these opportunities requires adjustment. Distortions and barriers can render that adjustment difficult and costly. As a result, domestic policy is necessary to support adjustment and to remove domestic distortions and barriers, in order to make trade more inclusive. As the digital revolution, geopolitical tensions and climate change increasingly affect the inclusiveness of trade, the importance of domestic policies to provide a level playing field domestically will become ever more important.

Domestic factors that prevent inclusiveness across economies also limit the inclusiveness of trade within economies.

The effects of trade highlight the fact that inclusiveness across and within economies are closely linked, as they are driven by similar factors. From excessive market power to underdeveloped infrastructure, many underlying country-specific factors are critical for trade to generate growth, and for that growth to be inclusive. This emphasizes the importance of the domestic policy environment in which trade operates, and it sets up a clear policy agenda that can unlock the potential of trade to benefit all. At the same time, trade policies are not necessarily neutral in terms of distributional effects. It is important that policymakers be aware of this and, to the extent possible, that they strive for trade policies that do not unnecessarily and unfairly disadvantage any particular group.

Some of these domestic factors can only be addressed through international cooperation.

International trade cooperation is essential to address the challenges to accessing export markets encountered by domestic MSMEs and women-owned businesses. Similarly, coordinated competition policy responses may be needed to address global market concentration by some MNEs. Connecting rural areas to larger markets may also require market access to neighbouring economies. Efforts to collect disaggregated data (e.g., firm-level, gender, employment or household data) at national and international levels can enhance the ability to evaluate the impact of policies on different groups of the population, and to monitor and adjust them accordingly. Chapter D discusses the critical role of international cooperation in more detail.

Endnotes

- 1 See <https://wid.world/>.
- 2 This general trend holds also for other inequality measures, such as the share of top 1 per cent of income earners in total income, or the share of the bottom 50 per cent. Estimates using alternative data sources obtain similar results (Pinkovskiy et al., 2024). Post-tax inequality has declined even faster, although the difference is marginal.
- 3 Using highly disaggregated data on both consumption and employment patterns in the United States and simulating a 10 per cent fall in trade costs, Borusyak and Jaravel (2024) find that all income deciles benefit on average, and that the gains are slightly higher for poorer households, ranging from 2.0 per cent in the bottom decile to 1.8 per cent for the top decile. However, over 99 per cent of the variance of welfare changes from trade shocks arises within, rather than across, income deciles.
- 4 Under so-called “de minimis” rules, imports may enter an economy duty-free if their value remains below a certain threshold. In the United States, this threshold is equal to US\$ 800.
- 5 See <https://www.enterprisesurveys.org/en/enterprisesurveys>.
- 6 See <https://wid.world/>.
- 7 A collaboration of Facebook (now Meta), the Organisation for Economic Co-operation and Development (OECD) and the World Bank, available at <https://web-archieve.oecd.org/temp/2023-02-13/476400-the-future-of-business-survey.htm>.
- 8 See <https://www.lisdatacenter.org/>.
- 9 See WTO (2017) and Grundke and Arnold (2022) for more comprehensive discussions.

D Inclusive trade and international cooperation

This chapter discusses how the multilateral trading system has helped some economies to take advantage of trade to further their development, but has not succeeded in helping others to harness trade for growth and considers what could be done to ensure that the WTO leaves no economy behind. It also examines the effect of the WTO on how the benefits of trade are shared out within economies, and discusses how the WTO and trade can be made more inclusive for people and firms. Finally, the chapter outlines the areas in which work at the WTO could be coordinated with work at other international organizations to help make trade more inclusive, such as by enhancing infrastructure and digital connectivity to bridge the digital gap or by ensuring coherence between trade and environmental policies.

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Key points

- The WTO's rules-based trading system supports all economies, especially the less powerful, by promoting non-discrimination between trading partners. To promote development, WTO rules also provide flexibilities to developing members and least-developed countries (LDCs) to help them to implement the WTO agreements and benefit from trade.
- More can be done for economies that have not yet derived all the benefits from trade. Further commitments in key areas, such as digital and services trade, could help improve their integration and income convergence. However, implementing special and differential treatment provisions in WTO agreements should be made more effective so that developing economies and LDCs can benefit more fully from trade.
- To develop a more inclusive economy, policies are required to reduce the obstacles currently preventing marginalized regions and groups, such as low-income households and micro, small and medium-sized enterprises (MSMEs), from participating fully in and benefitting from global markets. Domestic policies are also needed to lower the costs of adjusting to trade or technology shocks. At the international level, more active monitoring and more exchanges of information and best practices learning could help to make national policies more effective.
- Because different international organizations deal with complementary policies that could enable trade to better support development and inclusiveness – such as competition policy or infrastructure development to help make digital trade more inclusive – broadening and strengthening international cooperation could make these complementary policies more effective.

1. Ensuring that the WTO leaves no economy behind

(a) The WTO has contributed to convergence, but participation in the WTO has been uneven

Evidence discussed in this section shows that the WTO has helped reduce trade barriers and increase the predictability of trade policy, boosting trade flows and reducing their volatility. It also shows that the WTO has contributed to convergence by fostering reforms and good governance. While there are several arguments in support of specific flexibilities for developing countries, there is little evidence on the use and effects of such flexibilities. Available information, however, indicates that participation of low-income economies in the WTO has been limited.

(i) WTO membership and commitments have contributed to trade and economic growth

Being a member of the WTO involves making commitments on trade-related policies that can help to avoid mutually damaging “beggar-thy-neighbour” policies. Without international trade agreements, large economies might be tempted to raise tariffs unilaterally, reducing the price of their imports at the expense of their trading partners. Such actions could prompt trading partners to retaliate, and could lead to a trade war that harms all involved (Bagwell and Staiger, 1999; 2006; Broda, Limão and Weinstein, 2008). In the absence of international cooperation, a large economy could also impose a unilateral tariff to shift profits towards its domestic firms at the expense of foreign ones (Ossa, 2011, 2012). Thus, international trade agreements, such as those overseen by the WTO, can prevent large economies from setting their tariffs so as to increase their terms of trade (i.e., the export price to import price ratio), and from gaining economic benefits at the expense of their trading partners.¹

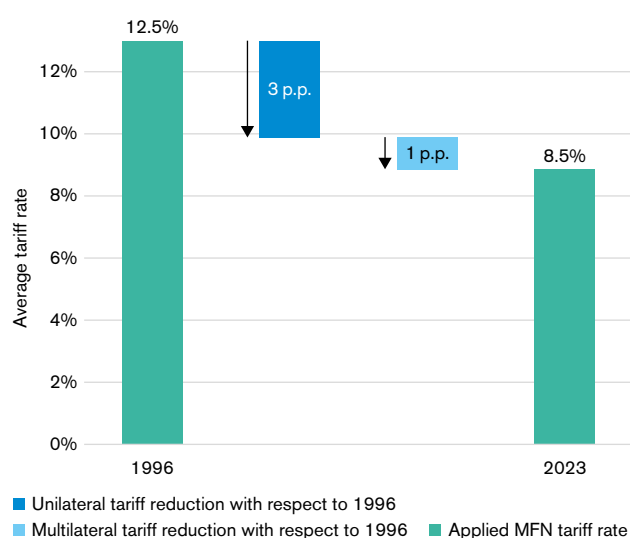
Strong commitments in international trade agreements, including those overseen by the WTO, enhance the credibility of trade policy reform programmes and help lock them in. Without this credibility, governments may struggle to open up to trade due to potential objections from domestic interest groups. According to the economic theory of trade agreements, by participating in an international trade agreement, a government can credibly announce its intention to open up to trade, while signalling to domestic producers that it cannot subsequently back down from those commitments

without facing retaliation from its trading partners (Maggi and Rodríguez-Clare, 1998). Commitments in international agreements act as an “external anchor” or “signalling device”, ensuring that trade reforms are enduring.

Non-discrimination provisions in the WTO agreements aim to foster the development of all members, leveraging their comparative advantages, through a trading system based on “equality of opportunities”. Non-discrimination provisions establish legal conditions for “equal” or “no less favourable” treatment between exporting economies and between domestic and imported goods and services. They do not aim to eliminate competition, but to ensure that it is based on the intrinsic aspects of goods and services, such as price or quality.

Economies benefit from joining the WTO through several channels. First, the WTO contributes to reducing trade barriers, which promotes trade-led growth. Second, WTO membership increases the predictability of trade policies, which fosters more stable trade flows. Third, the WTO agreements support trade reforms and efforts to improve domestic governance. This enhances economic performance and global integration for all members collectively. Beyond those pecuniary benefits, the WTO also gives all its members a voice at the negotiating table. It helps

Figure D.1: Contribution of multilateral and unilateral reductions to the global average MFN tariff rate, 1996-2023



Source: Authors' calculations, based on WTO data on applied MFN and bound tariff rates.

Note: The figure displays the decomposition of the reduction in the average applied MFN tariff rate between multilateral and unilateral reductions expressed in percentage points (p.p.).

to level the playing field and it promotes the rule of law through a binding dispute settlement system.

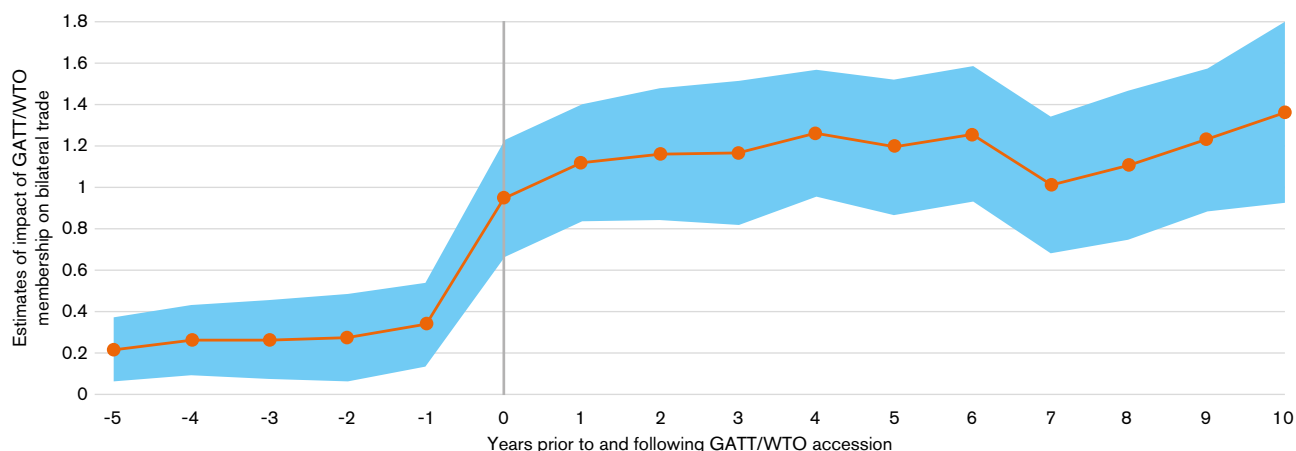
The WTO has helped to reduce trade barriers and foster trade growth. While unilateral action and regional agreements have largely contributed to dismantling trade barriers and promoting trade, the role of multilateral integration cannot be understated. As discussed in Chapter B, trade-opening has enhanced productivity and enabled income convergence across economies. Since the creation of the WTO, global average applied most-favoured-nation (MFN) tariffs have decreased by 4 percentage points, with one percentage point of this reduction directly attributed to multilateral integration (see Figure D.1). Part of the multilateral tariff reduction has come from economies that joined the WTO after its establishment in 1995. For example, the average tariff rate of China, which became a WTO member in 2001, dropped from 21.4 to 7.9 per cent due to China's commitment upon joining the WTO to bind all tariffs below their prior rates (Ianchovichina and Martin, 2001). Alongside multilateral tariff reductions, the rise in regional trade agreements (RTAs) has significantly lowered tariffs, bringing average effectively applied rates down to 2 per cent.

Membership of the General Agreement on Tariffs and Trade (GATT)/WTO has, on average, boosted trade between members by 140 per cent. International trade agreements aim to support economic growth by reducing trade barriers and promoting international trade. Larch et al. (2024)

show that the WTO promotes trade among members effectively, with a particularly strong impact on developing economies. The positive effects of WTO membership on trade increase over time, up to the 10th year after accession (see Figure D.2), highlighting the long-term benefits of WTO membership in fostering trade integration.

The WTO has increased the predictability of trade policy, boosting trade flows and reducing their volatility. By lowering trade policy uncertainty, it positively impacts exports, consumer price affordability and supply chain integration. The increased transparency fostered by the WTO, such as by means of precise tariff schedules, significantly decreases export volatility and boosts trade (Mansfield and Reinhardt, 2008). Predictable trading rules further reduce trade volatility and facilitate global value chain participation (Handley and Limão, 2022). For example, research finds that China's WTO accession, through which China obtained MFN status, accounted for over one third of China's export growth to the United States between 2000 and 2005 (Handley and Limão, 2017). This reduction in trade policy uncertainty lowered US prices and increased consumer incomes to the same extent as a 13-percentage-point permanent tariff reduction. The multilateral aspect of the WTO, unlike an RTA, reduces trade volatility not only among direct trading partners, but also across multiple trading partners through spillover effects (Chowdhury et al., 2021). WTO commitments also reduce protectionist reactions to import shocks, thereby lowering trade policy uncertainty (Jakubik and Piermartini, 2023).

Figure D.2: Lasting positive impact of GATT/WTO membership on trade



Source: Larch et al. (2024).

Note: The figure depicts the evolution of the average bilateral trade effects of GATT/WTO membership before and after joining the GATT/WTO. The annual bilateral trade effects were estimated using a structural gravity model. The shaded area represents the 95 per cent confidence interval. Time 0 refers to the year of joining the GATT/WTO.

Lower trade policy uncertainty has also played an important role in facilitating imports.

Firms are more willing to pay the fixed costs of importing new inputs when the risk that future trade barriers will raise input prices is low. Easier adoption of new inputs can enhance the efficiency and profitability of firms by promoting the use of complementary inputs. Empirical estimates suggest that China's WTO accession, by reducing uncertainty, significantly contributed to Chinese import growth, to an even greater degree than the tariff reduction associated with the accession. Additional post-WTO tariff reductions have further increased imports, as low trade policy uncertainty reduces importers' concerns about a possible increase in future trade protectionism (Handley et al., 2024).

WTO commitments help to diversify both exports and imports.

Thanks to the commitments made by economies during their WTO accession process, WTO membership enables economies to diversify their buyers, stabilizing export growth. WTO accession has been found to increase the number of products traded because it facilitates the formation of new trading partnerships (Dutt, Mihov and Van Zandt, 2013). WTO commitments also improve domestic producers' access to imported intermediate inputs by reducing reliance on only a few economies, thereby

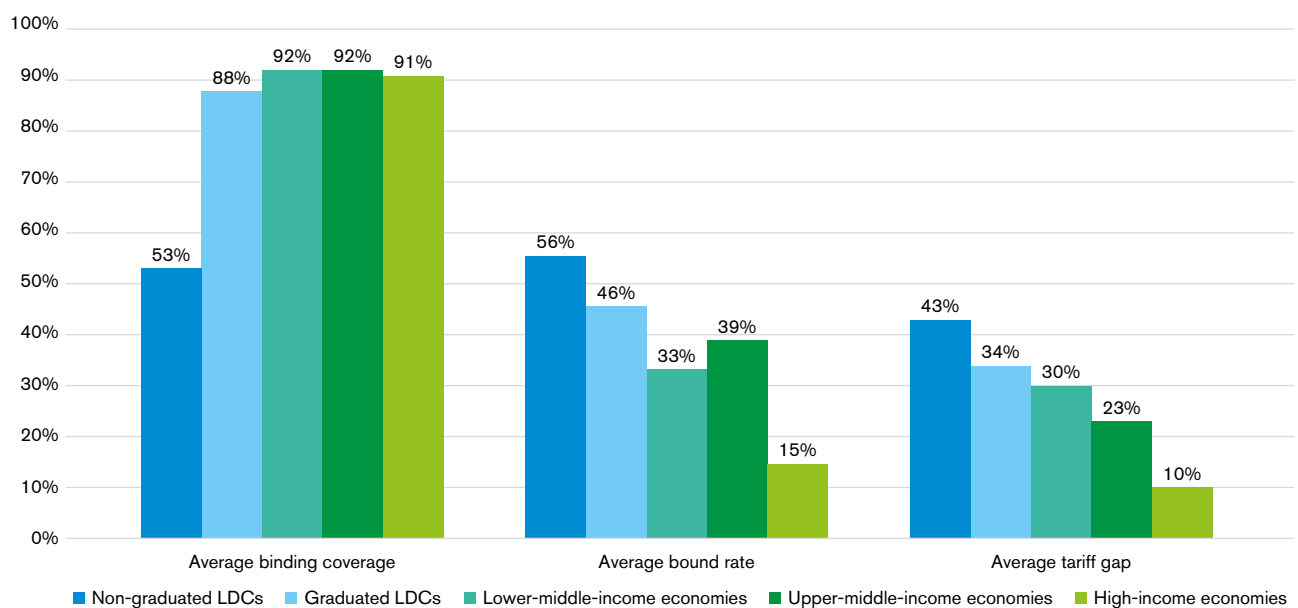
mitigating the impact of negative foreign supply shocks on economic growth (WTO, 2021b).

Low- and lower middle-income economies tend to have higher tariff flexibilities, on average, but also greater tariff uncertainty.

In multilateral trade negotiations on market access, least-developed countries (LDCs) typically benefit from exceptions to the reciprocity principle (i.e., the need to offer tariff concessions equivalent to those they receive), which allows them to avoid lowering their tariffs or to reduce them less than other economies. As a result, least-developed WTO members, in particular those that have not joined the WTO through the accessions process, have significantly fewer bound tariff lines (i.e., tariff lines for which they have committed not to apply a duty exceeding a certain maximum rate). Graduated LDCs, including those proposed for graduation in 2026, tend to have, on average, higher binding coverages, which can be attributed to their WTO accession process. The bound tariff rates of LDCs are, on average, higher than those of other WTO members. In parallel, the gap (also called "water") between LDCs' bound and applied tariffs is also larger than that of other members (see Figure D.3).

Low- and lower middle-income economies tend to use tariff flexibilities to raise their applied

Figure D.3: Low tariff binding coverage and high bound tariffs and tariff gap in lower-income economies, 2022



Source: Authors' calculations, based on WTO data on bound and applied MFN tariff rates.

Note: The figure displays the average binding coverage, average bound rates and tariff gap by income group. The binding coverage is the share of tariff lines at the six-digit level of the Harmonized System (HS) that are bounded. The tariff gap is the average difference in percentage points between the bound tariff rate and the applied MFN tariff rate at the six-digit level. The income groups are based on the 2022 World Bank's classification. The LDC group is based on the United Nations (UN) classification. Graduated LDCs include those that have graduated from LDC status and those proposed for graduation in 2026.

MFN tariffs more extensively. Low-income economies have raised their tariffs by 15 per cent or more on a higher share of tariff lines than other economies between 1995 and 2023 (see Figure D.4). While this trend reflects the trade policy flexibility provided by the WTO, it also points to greater tariff policy uncertainty, all things being equal.

The WTO has contributed to convergence by fostering reforms and good governance. When acceding to the WTO, economies commit to wide-ranging reforms in trade policy, economic institutions and domestic governance. These include reducing tariffs and non-tariff measures (NTMs), regulating state-owned enterprises, protecting intellectual property (IP) rights, establishing independent tribunals and ensuring uniform treaty application (Scalera, 2017). Such commitments can lead to meaningful changes in domestic institutions and economic outcomes. Governance metrics closely linked to those covered by WTO commitments, such as non-discrimination, transparency, and administrative due processes, have been shown to improve as a result of accession (Aaronson and Abouharb, 2014). Furthermore, the growth and investment boost that results from WTO accession tends to be stronger in economies with weaker institutions, as they benefit more from possible “policy anchoring” (Tang and Wei, 2009).

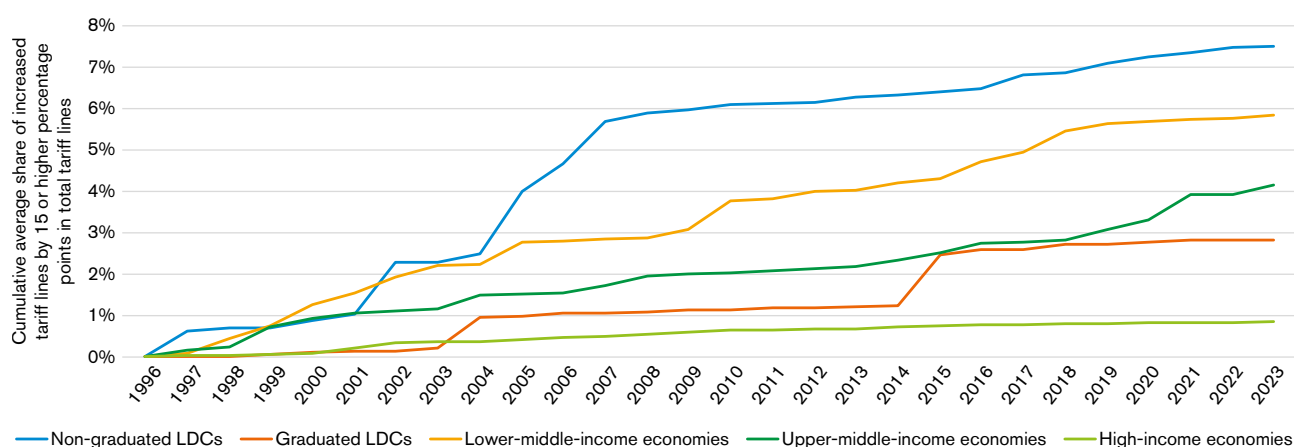
The economic growth effect of WTO accession depends on the extent of WTO commitments. Economies that have made more commitments outperformed those that did not (Tang and Wei, 2009; Brotto, Jakubik and Piermartini, 2021). New

contracting parties to the GATT – which preceded the WTO – were not systematically required to make substantial commitments and they automatically became WTO members.² Economies that were not GATT contracting parties, however, must, when seeking to join the WTO under Article XII of the Marrakesh Agreement Establishing the World Trade Organization (Marrakesh Agreement), make significant commitments, including structural reforms. Developing countries that acceded to the WTO after 1995 under Article XII have outperformed original WTO members in investment and GDP growth (see Figure D.5). This suggests that commitments are important for developing economies’ economic convergence. WTO econometric analysis suggests that economies undergoing rigorous accession negotiations grew 1.5 percentage points faster during the accession period than they would have otherwise and continue to grow faster after accession (Brotto et al., 2024).

(ii) LDCs seem to have benefited disproportionately from the TFA, but they have not yet realized the full potential of the TRIPS Agreement

The Trade Facilitation Agreement (TFA) has boosted trade and contributed to economic convergence. The TFA, which aims to simplify, modernize and harmonize export and import processes, came into force in 2017. It includes provisions for speeding up the movement, release and clearance of goods, including those in transit. It also promotes effective cooperation between customs and other relevant authorities on trade facilitation and

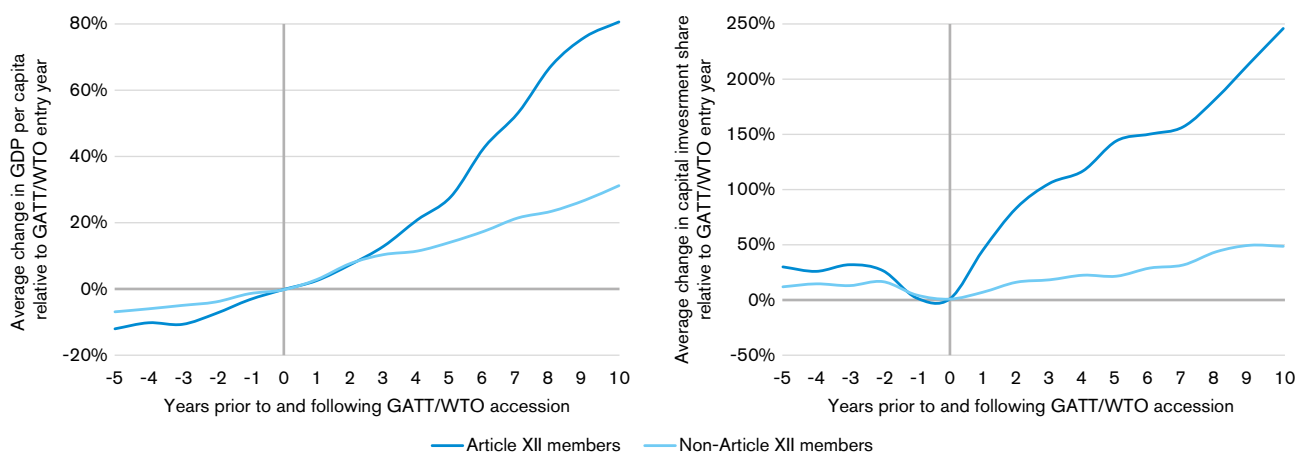
Figure D.4: Higher cumulative share of peaked tariff lines in lower-income economies, 1995-2023



Source: Authors’ calculations, based on WTO data on applied MFN tariff data.

Note: The figure displays the cumulative average share of the number of tariff lines increased by 15 percentage point or higher in the total number of tariff lines at the eight- or ten-digit level by income group. The income groups are based on the 2022 World Bank’s classification. The LDC group is based on the United Nations (UN) classification. Graduated LDCs include those that have graduated from LDC status and those proposed for graduation in 2026.

Figure D.5: Higher economic growth and capital investment in WTO members with more extensive commitments



Source: Authors' calculations, based on Penn World Table data and Brotto et al. (2024).

Note: The figure shows the average change in GDP per capita and the capital investment share in relation to the year of GATT/WTO entry for both Article XII WTO members and non-Article XII members. GDP per capita growth is based on expenditure-side real GDP expressed in 2017 US\$ purchasing power parity. Investment rate is the share of gross fixed capital formation in GDP. Article XII members refers to members that acceded the WTO after 1995 under Article XII of the GATT. Non-Article XII refers to GATT contracting members that became WTO members without having to go through the Article XII process.

customs compliance issues, and contains provisions for technical assistance and capacity-building. The implementation of the TFA has led to a substantial increase in trade, with agricultural trade among developing economies increasing by 16 to 22 per cent (Beverelli et al., 2023). Manufacturing trade has also risen, although the impact of the TFA on manufacturing trade has been more limited. Overall, the TFA has led to a global merchandise trade increase of 1.17 per cent and a real income rise of 0.12 per cent. The most substantial real income gains have been found to benefit LDCs disproportionately, with export increases estimated at 2.4 per cent, further contributing to economic convergence. Yet, as discussed in Chapter B, low-income and lower-middle-income economies have made limited progress in implementing trade facilitation measures, underscoring the need for further improvement.

Low-income economies may not have derived much benefit from the TRIPS Agreement because of challenges with its implementation.

The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) sets minimum standards for IP protection and enforcement. These common minimum standards across members aim to reduce trade barriers, create a predictable trading environment and encourage cross-border IP transactions, including the innumerable IP licences that constitute the bulk of trade in digital goods. WTO members are required to implement these standards in

their domestic systems. LDCs, however, benefit from a longer transition period in implementing the TRIPS Agreement. Originally, they were given 11 years to implement the TRIPS Agreement. This transition period was extended three times (in 2005, 2013 and 2021) and is currently valid until 1 July 2034. While there is strong empirical evidence that WTO membership boosts economic growth in developing economies, including LDCs, the impact of the TRIPS Agreement's provisions on patent law on low-income economies is less clear, bearing in mind that the transition period for LDCs has been extended and that they are not obliged under TRIPS to protect patents, and that many low-income economies have negligible numbers of, or no, patents in force. Patent reforms have been found to stimulate inward technology transfer through market-based channels, raise imports of high-technology goods, and potentially stimulate export growth in large and in middle-income economies (Branstetter, Fisman and Foley, 2006; Delgado and Kyle, 2022). However, empirical evidence on the positive effects of patent reforms on inward technology transfer in the poorest and smallest developing economies is limited.³ This is because low-income economies often lack the absorptive capacity and complementary infrastructure needed to benefit from enhanced IP regimes (Branstetter and Maskus, 2022). Stronger IP laws may not, therefore, lead to significant increases in innovation or technology transfer in this context, as local firms may struggle to adapt to the new competitive environment.

(iii) Evidence on the use and effects of WTO flexibilities is limited

While WTO membership involves a certain level of commitments, it also offers various flexibilities, some of which are only available to developing economies, including LDCs. Certain flexibilities are available to all WTO members, such as safeguard measures to respond to surges in imports or the option to introduce temporary trade barriers during balance-of-payments crises (WTO, 2009). Other flexibilities are more particularly intended to take into account the specific needs of low-income economies. WTO flexibilities specifically targeted at LDCs or developing economies fall under special and differential treatment (S&DT) (see Box D.1).⁴ Currently, there are over 155 S&DT provisions across WTO agreements, including 25 specifically designed for LDCs.

There are six different types of S&DT provisions.

A first type of S&DT provisions aims to increase the trade opportunities of developing countries. The Enabling Clause (see Box D.1), for example, aims to achieve a rapid and sustained expansion of the export earnings of developing economies. A second type of S&DT provisions aims to safeguard trade interests. Article 10.1 of the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), for example, requests that WTO members take account of the special needs of developing members, including LDCs, in the preparation and application of SPS measures. A third type of S&DT provisions offers flexibility in commitments. Article 27.2 of the Agreement on Subsidies and Countervailing Measures (SCM), for instance, exempts LDCs and developing economies with a per capita income not exceeding US\$ 1,000 from the prohibition to use export subsidies. A fourth type of S&DT provisions aims to provide longer transition periods for developing economies and LDCs to adjust to certain WTO rules. Most of the transition periods that had previously been established have expired. Among the few that are still valid are those under the TFA and under Article 66.1 of the TRIPS Agreement. A fifth type of S&DT provision aims to ensure that technical assistance is provided to developing economies either bilaterally or by an appropriate international organization – for example, as per Article 9 of the SPS Agreement. Finally, a sixth category of S&DT provision includes LDC-specific provisions, such as in Article 66.2 of the TRIPS Agreement (see Box D.2).

Several economic arguments support offering flexibilities to developing economies. First, the best policies for advancing technological development depend on an economy's level of

technological sophistication (its proximity to the “technology frontier”). Economies that are relatively technologically sophisticated focus on research and development (R&D) and efficient public-private research collaborations, while less technologically sophisticated economies may attempt to advance by absorbing technology from other economies through trade, foreign direct investment (FDI) and direct technology transfers. Second, low-income economies tend to specialize in low value-added products with limited technological progress and spillovers into other sectors. Low levels of export sophistication adversely affect economic growth (Hidalgo et al., 2007; Hausmann, Hwang and Rodrik, 2007; Lin and Chang, 2009). Low-income economies also have limited diversification, making them more vulnerable to economic shocks (WTO, 2021b). Policies to diversify economies are essential to provide a more stable development path. Third, the extent of market failures requiring policy intervention varies according to the income level of an economy. Market failures are particularly prevalent in developing economies due to factors such as imperfect information, a lack of competition and inadequate regulatory frameworks (Atkin et al., 2022). For example, capital market imperfections, which limit the growth of high-potential sectors and knowledge spillovers, can be more severe in developing economies. Labour market failures can be more severe in low-income economies with large informal sectors. Fourth, exporting firms in low-income economies struggle to comply with trade-related policies. Compliance costs with these regulations tend to be fixed and may require high-skilled expertise. Policies that reduce compliance burdens, such as longer transition periods and technical and financial assistance, can help firms in developing economies meet higher standards and enhance their competitiveness.

While flexibilities are important for addressing specific development concerns, some of them, depending on their design, could undermine the predictability and value of commitments.

Flexibilities can create uncertainty about the application of trade agreements, making future trade conditions less predictable. Temporary flexibilities can end up becoming permanent, and differing interpretations can lead to inconsistencies or disputes. Flexibilities can also erode the value of commitments for creating stable and predictable trading conditions by eroding trust and hindering long-term cooperation. Frequent use of flexibilities can make commitments seem unreliable, and can deter investment, if commitments are perceived to be easily altered. The challenge lies

Box D.1: Development considerations have progressively been integrated into the GATT and WTO

Originally, the GATT was designed as a set of “equal opportunities” or “neutral” provisions, which aimed to apply uniform rules to all contracting parties. “Development”, as the term is understood today, was not clearly identified as a GATT priority in 1948, although 12 out of the 28 original GATT contracting parties still consider themselves to be developing economies. Development considerations were, however, progressively incorporated into the GATT framework.

In 1958, Article XVIII of the GATT (“Governmental Assistance to Economic Development”) was revised to allow developing economies to support particular industries under certain conditions. As a number of overseas territories of GATT contracting parties gained their independence, Part IV – “Trade and Development” – was added to the GATT in 1966. The aim of GATT Part IV was to improve price stability and market access to primary products crucial for developing economies, and to support diversification by enhancing market access conditions for developing economies’ processed or manufactured products exports. Part IV became fully effective in 1971 with the adoption of a system allowing developed economies to offer non-discriminatory and non-reciprocal preferential tariff treatment for products from developing economies. This was extended in 1979 by means of the “Enabling Clause” – officially called the “Decision on Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries” – which allows developed economies to maintain preferential trading schemes, provides for further preferential access for LDCs, and allows developing economies to conclude RTAs with less stringent requirements.

Building on the GATT, the WTO framework, established in 1995, has taken different forms of development considerations into account over the years. For example, the preamble of the Marrakesh Agreement recalls the importance of supporting developing economies, in particular LDCs, in securing “a share in the growth in international trade commensurate with the needs of their economic development”.

Other WTO agreements and decisions have also established various S&DT provisions to allow developing economies, including LDCs, to benefit from more favourable and flexible treatment. In 2001, the Doha Ministerial Declaration mandated a review to strengthen and enhance the effectiveness of all S&DT provisions, resulting in various proposals.

In the early stages of the negotiations, 88 agreement-specific proposals were submitted in the Special Session of the Committee on Trade Development by developing members, including LDCs. The monitoring mechanism for S&DT provisions was adopted in 2013, but has seen limited use by WTO members. In the decade leading up to the 13th WTO Ministerial Conference, which took place in early 2024, S&DT negotiations were at an impasse. In 2015, the coalition of the G-90, which comprises the African Group, the LDC Group and the African, Caribbean and Pacific (ACP) Group of States, submitted a shortened list of 25 agreement-specific proposals, none of which was adopted at the 10th WTO Ministerial Conference in Nairobi. In 2017, the G-90 submitted a list of 10 agreement-specific proposals aimed at industrialization, structural transformation, and economic diversification, but no progress was made at the 11th WTO Ministerial Conference in Buenos Aires. Following the 12th WTO Ministerial Conference, discussions on S&DT have been guided by the renewed ministerial mandate under paragraph 2 of the 12th WTO Ministerial Conference outcome document. In 2023, the G-90 proposed various measures, including one related to sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) measures, and this proposal gained traction leading up to the 13th WTO Ministerial Conference.

At the 13th Ministerial Conference in 2024, WTO members recognized that, with the necessary support, developing economy members, including LDCs could remain committed to integrating WTO rules. A ministerial declaration was adopted on the precise, effective and operational implementation of S&DT provisions of the SPS and TBT Agreements. The 13th WTO Ministerial Conference Ministerial Declaration on S&DT is the first outcome ever made on agreement-specific proposals applicable to all developing economies since the launch of the S&DT negotiations in 2001.

Box D.2: WTO measures to increase the integration of LDCs into global trade

Over the years, WTO members have taken important steps to increase the integration of LDCs into global trade. They have offered market access opportunities and flexibilities to implement WTO rules, and have given LDCs priority when delivering technical assistance.

In the area of market access, significant progress has been made in providing duty-free quota-free market access for LDC products since the adoption of the Ministerial Decisions on Duty-Free Quota-Free Market Access for LDCs at the Hong Kong Ministerial Conference in 2005 and at the Bali Ministerial Conference in 2013. Members have also taken several steps to ensure simple and transparent rules of origin for LDC products. Two sets of guidelines were adopted to contribute to facilitating market access for LDC products. In addition, most of the preference-granting members notified their preferential rules of origin using a new template. In the 12th Ministerial Conference outcome document, WTO members recognized the need to continue work on trade preferences and on identifying best practices in preferential rules of origin.

Efforts have also been made to boost the participation of LDCs in services trade. The LDC services waiver, adopted in 2011 and currently valid until 2030, enables the provision of preferential treatment for LDC services and services suppliers in terms of market access and other measures. Currently 25 members have notified measures under the LDC services waiver, covering various sectors, including business services, transport, tourism and travel. However, the lack of data prevents a comprehensive assessment of whether these measures have resulted in economic opportunities for LDCs. Increased efforts are needed to track LDC services export data and to support LDCs in building capacity in services trade.

LDCs also enjoy policy flexibilities in implementing WTO rules, including a transition period to implement the TRIPS Agreement, which currently runs until 1 July 2034. LDCs are also eligible for benefits under Article 66.2 of the TRIPS Agreement, which calls on developed members to provide incentives to enterprises to promote technology transfer. Since 2003, developed members have been providing annual reports on this matter and the WTO Secretariat has been organizing annual workshops to discuss technology transfer to LDCs.

WTO members have taken steps to support LDC accessions. They adopted two sets of guidelines, in 2002 and 2012, which call upon WTO members to exercise restraint in seeking market access from acceding LDCs and set specific benchmarks regarding market access negotiations for goods and services.

In terms of technical assistance, LDCs remain a priority for the delivery of trade-related technical assistance by the WTO. They are the second largest recipient of Aid for Trade, for a total amount of US\$ 14 billion, representing 28 per cent of total Aid for Trade disbursements in 2022. LDCs also benefit from the support of the Enhanced Integrated Framework (EIF), which has disbursed over US\$ 334 million to provide evidence-based analysis, strengthen trade institutions and bolster key sectors with high export potential in LDCs.

In recent years, LDC graduation – i.e., graduation of these economies from LDC status – has become a main priority of the LDC Group at the WTO. LDCs have been asking WTO members to support them in a smooth transition by extending LDC-specific market access and S&DT for additional time after their graduation from LDC status. Since then, WTO members have adopted two decisions to contribute to a better integration of LDC graduates into global trade. First, members agreed to provide a smooth and sustainable transition period before they withdraw duty-free and quota-free market access after graduation. Second, at the 13th WTO Ministerial Conference, members offered LDC graduates three additional years during which they can adjust to WTO rules and disciplines and continue to access LDC-specific technical assistance.

in finding a balance that maintains the overall integrity of the trade agreement while allowing for necessary adjustments.

Economic theory also draws attention to certain drawbacks of S&DT provisions. For example, S&DT provisions can undermine future tariff negotiations. The

so-called “latecomer’s problem” refers to a situation in which developing economies face a significant imbalance in market access commitments compared to high-income economies. As discussed above, developing economies have, on average, higher bound and applied MFN tariffs than developed economies.

This disparity arose as a result of decades of tariff negotiations among advanced economies, in which exemptions to the reciprocity principle allowed developing economies to opt out from reciprocal tariff reductions. In that context, future tariff negotiations may be challenging, given that developing economies would be expected to make relatively large tariff reductions, while developed economies would have fewer tariff reductions to offer in return (Bagwell and Staiger, 2014). Anecdotal and empirical evidence suggest that developing economies that have made fewer commitments have benefited less from their WTO membership.

While various WTO agreements include S&DT provisions, several factors seem to hinder their effective use. Several developing economies and LDCs have pointed to difficulties in implementing certain S&DT provisions, on the basis that the vagueness of S&DT provisions and the complexity of their reporting and review mechanisms are not conducive to efficiency and legal certainty.

Evidence on the use of S&DT provisions by developing economies and LDCs is limited, including because of capacity-related issues. More evidence is therefore needed. Members are required to notify the WTO when they use specific S&DT provisions, but the number of S&DT-related notifications remains limited.⁵ It is unclear whether this indicates that few S&DT provisions have actually been invoked, or that they have been used without being notified. With several developing economies registering impressive increases in their share of global merchandise trade, the accurate tracking of the use of S&DT provisions has become even more difficult. Improving transparency in the use of S&DT provisions is important, but it may require technical assistance support.

While there is some evidence of the effectiveness of certain trade policies, economic analysis of the impact of the different types of S&DT provisions is lacking. For instance, as discussed in Chapter B, developing economies, particularly LDCs, have benefitted from preferential access to many markets for exports, even if rules of origin and other factors may impact the use of these preferences. Tariff preferences have expanded exports from developing economies and LDCs (Cernat et al., 2003; Bekkers and Cariola, 2024), despite the administrative costs associated with these preferences (Cariola and Lanz, 2022). Preference schemes have also been found to raise exports to third-party economies through learning-by-exporting effects (Cherkashin et al., 2015). As discussed below, Aid for Trade projects have also

been found to increase trade opportunities. However, while all of this suggests that S&DT provisions can contribute to economic convergence, there is a lack of specific economic impact analysis of these provisions.

WTO members' views on S&DT differ. Some developed economies have questioned whether developing economies have not been granted too many exemptions and have advocated for reducing the scope of S&DT provisions in current and future negotiations (Hoda, 2021). In addition, some developed economies have expressed concerns regarding self-determination of development status within the WTO (Hoda, 2021; Ukpe and Khorana, 2021). In response, a number of developing economies have argued that the self-declaration of development status is a long-standing practice and that, despite significant economic progress among many developing members, the standards of living in these economies still significantly lag behind those of developed economies. One of the key points of discussion involves weighing the implementation of horizontal S&DT provisions applicable to all developing members against the identification of specific challenges with a view to exploring targeted solutions.

(iv) Aid for Trade and technical assistance enhance export opportunities

Aid for Trade and similar technical assistance initiatives help firms in developing economies, especially LDCs, to meet international standards and access global markets. Since 2006, the WTO-led Aid for Trade initiative has contributed US\$ 648 billion to strengthen the export potential of developing economies and LDCs and help them build the trade capacity and infrastructure they need to increase their participation in international trade. Developing economies view the Aid for Trade initiative as supporting the economic growth objectives found in their development strategies, including achieving a higher income group status (OECD and WTO, 2024). Aid for Trade disbursement flows in 2022 reached an all-time high of US\$ 51.1 billion (expressed in 2022 constant US\$), marking a 14 per cent increase in real terms compared to 2021. After several years of decline, the share of Aid for Trade disbursements allocated to projects in low-income economies has been increasing, and amounted to US\$ 15.1 billion in 2022. A large share of Aid for Trade disbursement is allocated to building productive capacity. This includes projects aimed at enhancing the skills and capabilities of developing economies to comply with international standards and other regulatory requirements. Members at the 13th Ministerial Conference underlined the vital role and ongoing necessity of the Aid for Trade initiative in building capacity for trade.

Empirical evidence points to the effectiveness of Aid for Trade in enhancing the trade potential of developing economies and LDCs.

Aid for Trade projects that focus on developing trade strategies, negotiating and implementing trade agreements, and building productive capacity, have increased exports and enhanced the ability of exporters to meet trading partners' requirements (Lee and Oh, 2022; Yang, Wang and Whang, 2023). Aid for Trade helps both to expand established trade relations, in particular between recipients and contributors, and to establish new trading relations (Cadot et al., 2014; Nathoo et al., 2021; Aboushady, Harb and Zaki, 2024; Hoekman and Shingal, 2024).

(v) The participation of low-income economies in the WTO has increased over time but remains limited

The WTO serves as a forum in which members can negotiate new trade rules, oversee the implementation of trade obligations, and resolve trade disputes among members. WTO committees facilitate discussions and allow members to raise trade concerns about specific measures adopted by their trading partners. Active participation in WTO activities is important for economies to reap some of the benefits from the WTO. Yet many developing members face financial and human resource constraints that hinder

their ability to participate actively, propose measures and monitor potentially harmful policies of other trading partners.

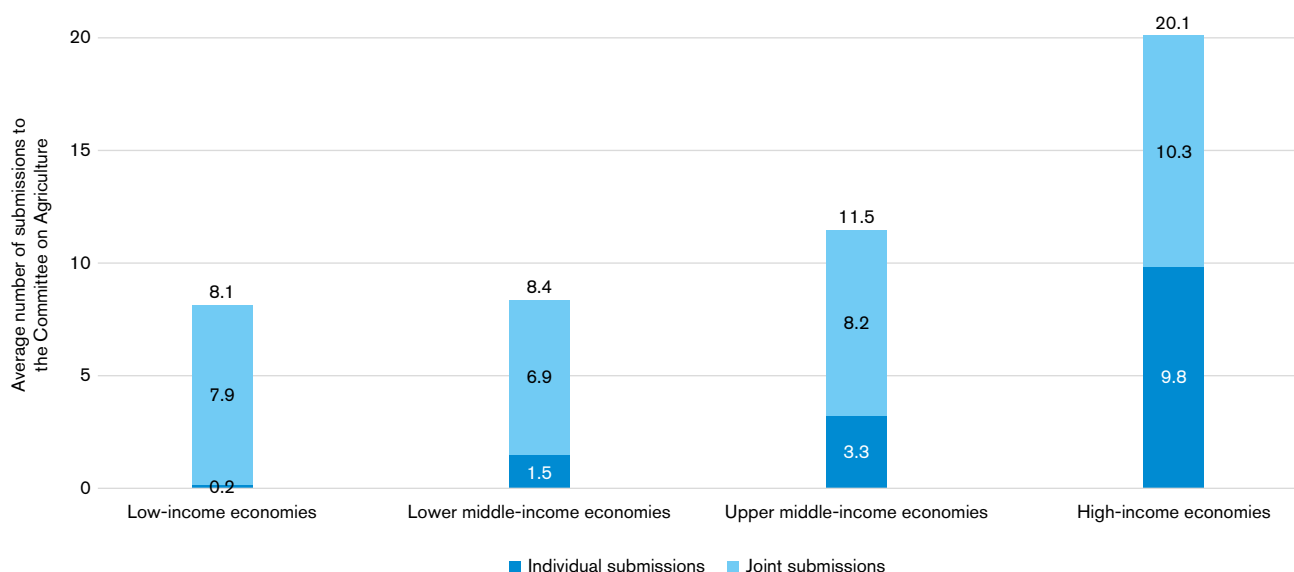
LDCs and smaller economies tend to participate in WTO negotiations as a group.

As a member-driven organization, the WTO negotiation process revolves around proposals put forth by interested individual members or groups of members, which are then discussed and negotiated among members in dedicated WTO bodies. A number of WTO members have formed coalitions, often speaking with one voice using a single coordinator or negotiating team.⁶ For instance, in the WTO Committee on Agriculture, low-income and lower-middle income economies have mostly tabled joint submissions (see Figure D.6).

Capacity constraints have been holding some members back from participating in the regular WTO work.

WTO transparency mechanisms enable members to monitor trade policies and resolve trade issues in a non-litigious manner, and transparency improves decision-making by reducing trade policy uncertainty. For instance, concerns raised in the TBT Committee when regulations are still at the drafting stage tend to reduce the likelihood of formal disputes (Posada, Ganne, and Piermartini, 2020). Yet participation in WTO committees by low-income members is limited. More than 60 members – mostly

Figure D.6: Greater participation of lower-middle income members in negotiations through joint proposals, 1995-2023



Source: Authors' calculations, based on WTO data on submissions in the Committee on Agriculture.

Note: The figure displays the average number of submissions in the Committee on Agriculture between 1995 and 2023 by income group. The average number of submissions for each income group is calculated by dividing the total number of proposals involving at least one WTO member from that income group by the total number of WTO members having made a submission in that income group. The income groups are based on the 2022 World Bank's classification.

developing economies – submit, on average, less than one TBT notification per year. In the Committee on Agriculture, low- and lower-middle income members, including LDCs and many small and vulnerable economies (SVEs), also tend to ask significantly fewer questions compared to other members (see Figure D.7), and they are more likely to support other members’ questions rather than initiate their own.

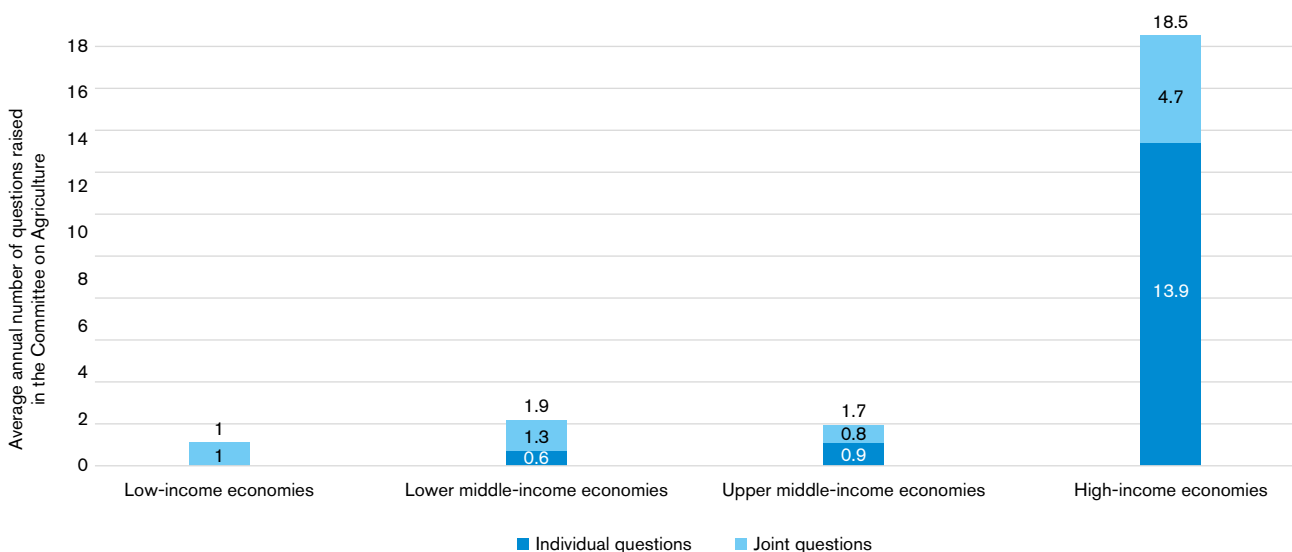
Low- and middle-income economies use the WTO dispute settlement mechanism less often than other members. A functioning dispute settlement mechanism is essential for maintaining a predictable trading environment. A dispute arises when a member considers that a measure adopted by another member is inconsistent with the latter’s WTO obligations and nullifies or impairs the former’s benefits under the WTO agreements. Since the WTO’s inception, members have initiated more than 620 disputes, averaging 21 per year. Many developing members have used the WTO dispute settlement mechanism to assert their trade rights and interests, but significant disparities still exist among WTO members. Low- and middle-income members, have initiated fewer dispute proceedings than other WTO members, and have participated primarily as third parties (see Figure D.8).

Several factors may explain a relatively low participation by lower-income economies in

the WTO functions. These may include limited commercial interest or trade impact, as well as a lack of financial and human resources. Although information about participation is limited, low-income members tend to participate less in WTO negotiations, as well as in transparency, monitoring and dispute settlement activities, more likely because of resource constraints than disinterest. For instance, members with limited government capacity are likely to have a greater backlog of missing annual notifications required under some WTO agreements, such as those on agriculture and support measures (see Figure D.9).⁷ In addition to limited legal and technical capacity and financial constraints, factors such as information asymmetries and political and diplomatic considerations may also affect a WTO member’s decision to initiate a formal dispute.

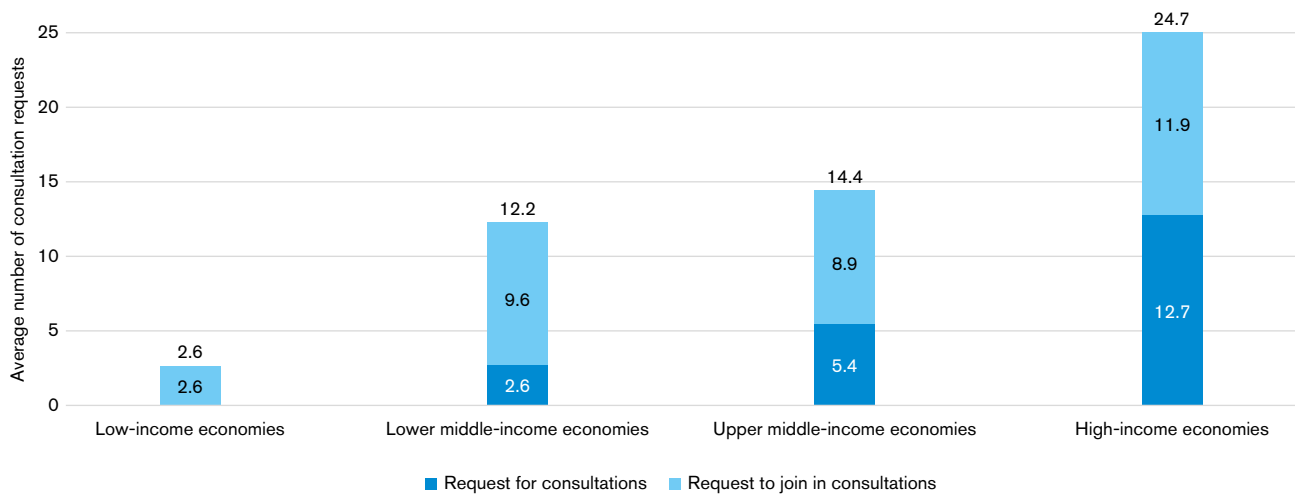
Various rules and resources contribute to facilitating the participation of lower-income members in the WTO. The relatively low participation does not imply that the WTO is not accessible to all members. The WTO provides technical assistance upon request to build the capacity of developing economies and LDCs to comply with WTO obligations and fully utilize their rights. In recent years, several technical assistance activities on transparency obligations have introduced tailored approaches to assist participants in adopting a proactive and consistent response to meet,

Figure D.7: Greater participation of less-integrated members in committee work through joint questions, 1996-2016



Source: Authors’ calculations, based on WTO data on questions submitted in the Committee on Agriculture.
Note: The figure displays the average annual number of questions raised in the Committee on Agriculture between 1995 and 2023 by income group. The average annual number of questions for each income group is calculated by dividing the average annual number of raised by at least one WTO member from that income group by the total number of WTO members having raised questions in that income group. The income groups are based on the 2022 World Bank’s classification.

Figure D.8: Lesser participation of lower-income members in dispute proceedings, 1995-2023



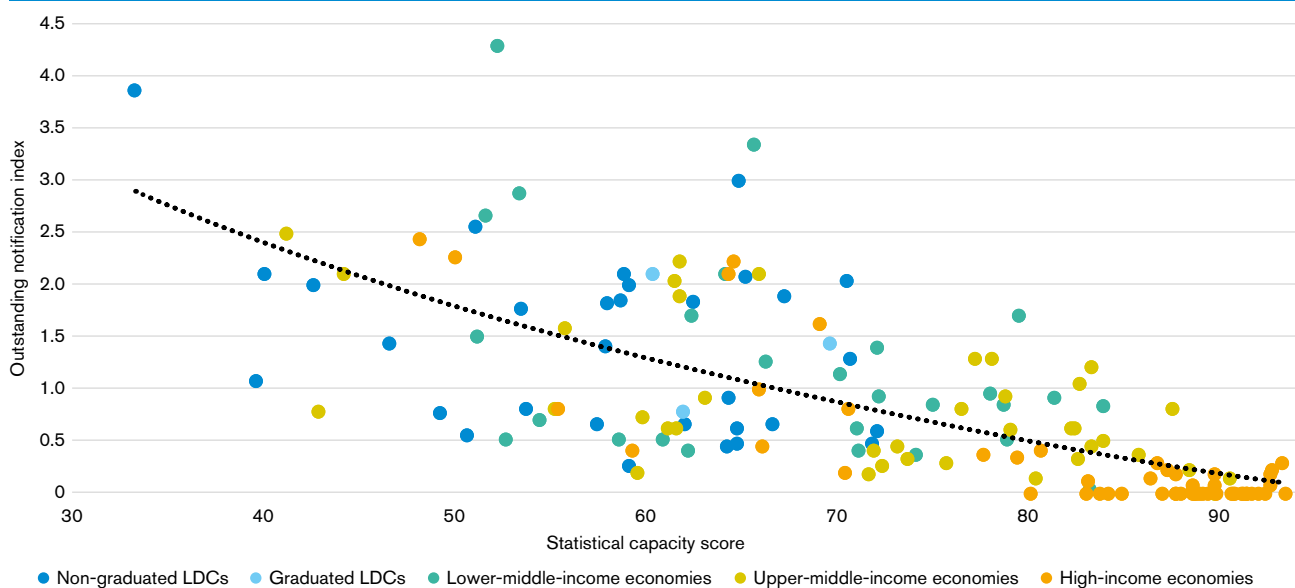
Source: Authors' calculations, based on WTO data on requests for consultations.

Note: The figure displays the average number of WTO consultation and dispute proceedings between 1995 and 2023 by income group. The average number of consultation requests for each income group is calculated by dividing the total number of consultation requests involving at least one WTO member from that income group initiating a dispute or joining in consultations by the total number of WTO members in that income group having submitted a consultation request as complainant or third party. The income groups are based on the 2022 World Bank classification.

and remain in compliance with, transparency provisions (WTO, 2024c). The WTO also provides technical assistance, including training courses and advice, to support developing members' participation in the dispute settlement mechanism. In parallel, the Advisory Centre on WTO Law (ACWL), established in 2001,

offers developing and LDC members advice, support and training on WTO law, including representing them in WTO dispute settlement proceedings at discounted rates. Several private sector law firms routinely represent developing members in the context of WTO disputes and sometimes offer pro-bono legal advice.

Figure D.9: Higher number of outstanding notifications in members with lower government capacity, 2022



Source: Authors' calculations, based on World Bank data on statistical capacity score and WTO data on notifications.

Note: The chart displays the relationship between a member's statistical capacity score and its outstanding notification requirement index in 2022. The statistical capacity score, ranging from 0 to 100, measures a government's ability to collect, analyse and disseminate high-quality data about its population and economy. The outstanding notification index measures the normalized annual number of pending WTO notifications (e.g., support measures). The income groups are based on the 2022 World Bank's classification.

(b) The WTO can do more to help economies that have not fully benefited from trade

Greater international cooperation is needed to foster the participation of lower-income economies in trade and to make the trading system more inclusive. While many members have benefited from the WTO through trade reforms, tariff reductions and stable trade policies, some have seen limited gains. These members, mostly developing economies or LDCs, tend to participate less in the WTO, despite available S&DT provisions. This challenge highlights the need for greater international cooperation and WTO support in the face of geopolitical tensions, the digital revolution and climate change. Maintaining an open and predictable multilateral trading system is essential to support trade-led economic convergence. Accelerating the accession to the WTO of new members could further contribute to economic convergence. It is also important to extend commitments in dynamic areas and ensure effective flexibilities, while addressing impediments to low-income members' participation in the WTO.

(i) Maintaining an open and predictable multilateral trading system

To avoid rolling back economic convergence achieved and to create new opportunities for further convergence, it is essential to ensure that the multilateral trade system remains open and predictable, for example, by reducing trade costs, establishing a fully functional dispute settlement system and enhancing transparency and information-sharing. Addressing trade barriers and improving trade facilitation are also essential to create a more open and predictable trading environment, as well as to encourage investment and technology diffusion. As discussed in Chapter B, economies that have not been converging often face higher trade costs and cumbersome customs procedures. In addition, as the share of South-South trade is growing, access for exporters from developing economies to the markets of other developing economies is increasingly important.

A fully functional and accessible dispute settlement system is crucial for enabling low-income economies with limited bargaining power to participate as complainants and respondents. This is particularly important as increasing geoeconomic tensions may disproportionately limit the access of low-income economies to global markets (WTO, 2023c). Efforts to improve accessibility to the dispute settlement system, an issue which a large majority of delegations have identified as a top priority,

are part of the ongoing WTO work on reforms. At the 13th WTO Ministerial Conference in 2024, members adopted a Ministerial Decision recognizing the progress made with the view to having a fully and well-functioning dispute settlement system accessible to all members by 2024.

Enhancing trade policy transparency and information-sharing can further improve policy decision-making, business operations and investor confidence in low-income economies.

All WTO members derive important benefits from the various information-sharing and transparency requirements in several WTO agreements (see opinion piece by Giovanni Maggi). Several transparency tools have been developed, such as the ePing SPS & TBT platform, developed by the WTO in conjunction with the International Trade Centre (ITC) and the United Nations (UN), and which catalogues over 50,000 TBT notifications to provide relevant regulatory information to firms exporting to new markets. However, as discussed above, given the uneven geographical coverage of notifications, the information-sharing processes could be further improved. A recent ministerial decision, adopted at the 13th Ministerial Conference, calls for reinforcing TBT information-sharing processes, encouraging early engagement in commenting on draft technical regulations to mitigate unnecessary trade barriers, and sharing best practices. Leveraging digital technologies could further enhance trade policy transparency by providing more efficient data collection, analysis and dissemination tools (Cernat, 2023), but the digital divide must be addressed to ensure that developing economies have access to the necessary digital infrastructure and skills.

In the current WTO reform debates, “reform by doing” work has the potential to facilitate the participation of LDCs in WTO work. As part of the “reform by doing” work, effective participation of all members in WTO bodies was highlighted as being important to advance work in an inclusive manner and to meet members' objectives. A number of participatory challenges and concerns were raised in members' proposals or contributions, including, for example, disparity in the use of digital tools or support to delegates, and several ideas to address these challenges and concerns were put forward. The “reform by doing” work progressed in 2023. The Goods Council, among others, implemented 127 reforms to improve its manner of functioning, as well as that of its 14 subsidiary bodies. These included significant changes to assist delegates, and the introduction of digital tools to improve productivity and exchange of information.⁸ Although some of those

reforms are particularly helpful for LDCs, more could be done to ensure that LDCs can make use of the new opportunities (Wolfe, 2023).

Economies joining the WTO can, through their accession reforms, benefit from improved access to imported inputs, increased FDI, and enhanced good governance. Economies that are not yet members of the WTO would benefit from accession, provided they undertake relevant trade reforms. While WTO members account for nearly 99 per cent of global trade, 22 accessions are currently in progress, and several economies have not applied for WTO membership. The profiles of these latter economies are diverse, and include some LDCs and commodity-exporters. The WTO accession process could be improved by enhancing technical assistance and capacity-building support for aspiring members, ensuring they can more quickly align their trade policies and regulations with WTO agreements.

(ii) Updating the rulebook

In a context characterized by the digital revolution, the need to transition to a low-carbon economy, and marked geopolitical tensions, economies need to address both their own trade barriers and those imposed by others to fully capitalize on future trade opportunities and support economic convergence. As services trade and digital trade grow rapidly, upgraded commitments from both well-integrated and less-integrated economies can help low-income economies leverage services and digital trade for development. Also, with the transition towards a low-carbon economy altering comparative advantages, trade-related environmental policies need to be better coordinated to ensure that low-income countries' trade opportunities are expanded and not inadvertently reduced. Similarly, given rising geopolitical tensions, international cooperation is more than ever needed to address the use of export restrictions and tariff escalation and to find alternative approaches. Finally, new commitments could also address some of the barriers that hinder low-income economies' participation in trade, identified in chapter B.

While services-led growth is increasingly seen as a new path to development, many services sectors face significant trade restrictions, especially in lower-income economies. Trade costs in services trade are diverse, and include compliance costs imposed by “behind-the-border” regulatory measures, as well as information and transaction costs related to cultural and institutional differences and transport and travel costs (WTO, 2019). Although trade costs for services trade have

decreased in the last 20 years, thanks to digital technologies, reduced policy barriers and investment in infrastructure, they still remain significantly higher than those in goods (WTO, 2021c).

Combining market-opening negotiations with international cooperation on regulatory issues can help further harnessing the potential of services trade. Expanding multilateral commitments and deepening international cooperation in services would allow economies to reap benefits beyond unilateral opening-up of services markets, and would facilitate global value chain (GVC) participation (WTO, 2019; 2023c; World Bank and WTO, 2023a). International cooperation on regulatory issues can also contribute to reduce unnecessary differences in domestic regulatory frameworks, as well as lower unintended trade costs for services suppliers. Informed by generally recognized good regulatory practices, the new set of rules on Services Domestic Regulation – adopted in 2024 by a group of members representing around 90 per cent of world services trade – aims to streamline authorization requirements and ease procedural hurdles faced by services suppliers and investors. International cooperation on trade in services for development can also help to mobilize greater levels of technical assistance and capacity building, including in the context of Aid for Trade, by addressing data gaps, supporting greater participation of low- and middle-income economies in policy discussions on trade in services, strengthening regulatory frameworks, promoting diversification, and addressing key supply-side constraints, including improving workers' services-related skills (World Bank and WTO, 2023a). The WTO and the World Bank are developing an initial work programme on trade in services for developing economies.

More cooperation on digital trade could benefit less integrated or diversified low-income economies, providing new trade opportunities and supporting greater economic convergence. Digital technologies can drive economic growth by increasing productivity, reducing production costs, enhancing economies of scale, improving financing efficiency, and promoting innovation through the exchange of ideas. Digital tools can also boost international trade that is digitally ordered and/or digitally delivered by reducing trade costs (IMF et al., 2023). Digital trade can foster economic diversification by increasing the cross-border tradability of services. Importing digitally-delivered services, such as financial services, can further enhance firms' competitiveness by providing new funding sources and improving financial transactions (WTO, 2023c).

Soft rules and the informational role of the WTO

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The WTO rules-based system is under a considerable amount of stress. We may be at a juncture where the WTO needs to step back and shift emphasis, at least in some domains, toward more “soft” rules that key players can find politically easier to comply with.

The dispute settlement system is under stress due to the disabling of the Appellate Body (AB). But it is important to remember that, in the General Agreement on Tariffs and Trade (GATT) years, the Dispute Settlement Body (DSB) was remarkably effective even without an AB, and this in spite of the fact that the adoption of the ruling could be blocked by the losing country.

One way to understand this is that an important role of the DSB is to disseminate information across the trading community, thereby facilitating multilateral normative pressures. As argued in Maggi (1999), multilateral enforcement does not have to take the form of all-out multilateral trade sanctions in response to violations of the agreement. A softer form of multilateral enforcement, for example, is one in which the trading community extends less “goodwill” to the country found in violation of the agreement, and is perhaps less inclined to sign new agreements with that country.

Maggi (1999) also argues that the benefits from multilateral enforcement, relative to a system based solely on bilateral retaliation threats, are greatest when there are strong imbalances of power between trading partners. This line of reasoning makes me hopeful that the WTO Dispute Settlement System may still play a positive role even if there is a return to the GATT system.

An informational role of the WTO that is sometimes understated is to enhance transparency and information exchange between governments. For example,

(i) The WTO trade monitoring exercise and Trade Policy Review Mechanism enhance the monitoring of government policies, thus complementing the informational role of the Dispute Settlement System discussed above. As discussed in WTO (2023c), there is scope for strengthening these mechanisms.

(ii) The WTO fosters the sharing of technical and evidence-based information through specialized committees. If an expert committee persuades a government that non-trade concerns (such as mitigating labour market disruptions, addressing environmental externalities or protecting national security) can be addressed effectively with less trade-restrictive measures than border measures, this can contribute significantly to global efficiency. This committee-based approach has already been embraced by the WTO in the area of specific trade concerns for behind-the-border measures. The same approach should be broadened to a wide range of non-trade concerns.

(iii) Bargaining theory suggests that better mutual information about each other’s objectives and constraints reduces the likelihood of bargaining failures (Ausubel, Cramton, and Deneckere, 2002). Intuitively, governments aware of each other’s domestic political constraints are more likely to find a compromise. This suggests that even the seemingly modest institutional function of fostering “mutual understanding” between governments may be valuable.

The WTO may also have a role to play in informing the global community of citizens about the dangers of a collapse of the rules-based multilateral trading system. Increasing public awareness of what the world would look like if the WTO ceased to exist might help to counter the political pressures that push in the direction of protectionism.

In conclusion, I do not mean to suggest that the WTO should give up on enforcing its fundamental rules. However, at a time when flexibility seems more critical to the survival of the WTO than the enforcement of hard rules, it might be a good idea to shift the focus toward the softer side of the WTO, at least for a while.

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Despite overall growth, the participation of low-income economies in digital trade remains limited. However, it could increase with greater policy coordination. Digitally delivered service exports are dominated by high-income economies and a small number of middle-income economies. LDCs account for a mere 0.2 per cent of global exports of digitally delivered services, a market share that has fallen in recent years (WTO, 2023a). WTO simulations suggest that improving digitalization could increase the share of low-income economies in digitally deliverable services from 0.5 to 1.8 per cent (Bekkers et al., 2024). While improving customs procedures and reducing import costs can contribute to economic growth, the well-designed regulation of cross-border data flows also matters. A lack of data regulations can reduce customer trust, while stringent data regulations can increase compliance costs. Additional simulation results show that global GDP could drop by about 1 per cent if trade costs related to data flows increased due to geopolitical considerations. Conversely, global GDP could rise by nearly 2 per cent under a more coordinated data policy scenario.

Bridging the digital divide and preparing developing economies for digital trade requires both domestic and international mobilization. Improving the adoption and effective use of digital technologies requires a comprehensive and multi-faceted strategy. This includes investing in physical and digital infrastructure, enhancing digital literacy and skills, and establishing regulatory frameworks that support digital trade. As they navigate the complexities of regulating the digital economy, governments seek to balance facilitating the growth of the digital economy and addressing new regulatory challenges. These challenges include cross-border data flows and competition.⁹ Domestic efforts to foster digital trade need to be complemented by greater international cooperation to build capacity in developing economies to improve digital connectivity and skills and to create a more transparent and predictable global digital regulatory environment. A majority of WTO members consider that the existing WTO rules on digital trade need to be updated and complemented to respond to the changing nature of trade and to facilitate digital trade. Under the Joint Initiative on E-commerce, 90 WTO members, including many developing economies and five LDCs, are negotiating specific rules on digital-trade-related issues. In July 2024, a stabilized text governing some aspects of digital trade was published.

International initiatives leveraging the specific expertise of different international organizations

can catalyse more inclusive digital trade. The Work Programme on Electronic Commerce tasks the WTO Committee on Trade and Development with examining and reporting on the development implications of digital trade, taking into account the development, economic and financial needs of developing economies. Aid for Trade projects increasingly focus on digital trade, and development finance tripled between 2015 and 2019, reaching a total of US\$ 18.6 billion (OECD and WTO, 2024). More recently, the WTO and the World Bank launched the “Digital Trade for Africa” project to help African economies harness digital trade opportunities. The initiative aims to ensure that digital infrastructure is supported by enabling regulatory frameworks, in order to magnify the benefits of digital trade, with the WTO and World Bank leveraging their synergies to provide concrete technical assistance and capacity-building activities (World Bank and WTO, 2023b). As discussed in Chapter C, greater international cooperation on digital trade can help reduce business uncertainty and encourage the participation of smaller businesses in the digital economy by mitigating the fixed costs associated with complying with digital regulations.

Coordinated investment policies can contribute to economic convergence by reducing trade costs, supporting infrastructure development and fostering innovation. Aligning regulations, streamlining administrative procedures and improving policy transparency and predictability through greater cooperation can reduce transaction costs and stimulate investment. Collaborating on investment can also promote infrastructure development projects serving the public good, such as transportation, energy, telecommunications and water management systems, which are crucial for economic development because they enhance connectivity, reduce transaction costs and improve the overall business environment. In addition, economies can cooperate to promote innovation and facilitate technology transfer through different mechanisms, including investment partnerships, R&D initiatives, technology parks and technology-sharing agreements.

Although low-income economies only receive a small share of FDI, they stand to benefit significantly from improvements in investment facilitation. LDCs’ share of greenfield FDI projects, i.e., where a company establishes new operations in a foreign country from the ground up, declined from 3 per cent in the mid-2010s to 1 per cent between 2021 and 2023 (UNCTAD, 2024a). More generally, FDI in low-income and lower middle-income economies

has dropped by one third over the past two decades. Strengthening international cooperation to ensure a stable and open investment climate is essential. Over 125 WTO members, including many developing economies and several LDCs, finalized the Investment Facilitation for Development (IFD) Agreement in November 2023. This plurilateral agreement, which complements the Agreement on Trade-Related Investment Measures (TRIMs) and the General Agreement on Trade in Services (GATS), focuses on transparency, streamlining investment authorizations, international cooperation and sustainable investment, including responsible business conduct and anti-corruption measures. A recent simulation study suggested that implementing investment facilitation measures, such as online information publication and streamlined authorization procedures, could generate global welfare gains ranging between 0.6 per cent and 1.7 per cent, with the largest gains in low-income economies (Balistreri and Olekseyuk, 2024).

Although both tariffs and domestic support heavily distort global agricultural trade patterns, reducing domestic support could help LDCs

more than reducing tariffs. Agriculture remains a vital sector in low-income economies, accounting for over 58 per cent of employment on average in 2022 (see Box D.3). While, as discussed in Chapter B, focusing solely on agriculture will not lead to economic convergence, promoting agricultural trade and improving the functioning of markets for food and agriculture can, to an extent, contribute to enhancing economic growth. Simulation analysis suggests that removing domestic support and tariffs on agriculture and food products could raise global real income by US\$ 48 billion (Anderson et al., 2023), almost 60 per cent of which could benefit developing economies. However, opening up trade in high-income economies would only generate 60 per cent of the gains of developing economies, highlighting the significance of agricultural trade reforms in emerging economies as well. LDCs would not necessarily benefit fully from such broad reforms of domestic support and tariffs, because many of them already enjoy tariff preferential access to markets in high-income economies (Bureau, Jean, and Matthews, 2006). While a global elimination of tariffs on agricultural goods would eliminate tariff preferences, abolishing domestic support globally

Box D.3: The economic importance of cotton for LDCs

Raw cotton fibre is a major source of export earnings for several LDCs. The cotton industry contributes significantly to the economies of these LDCs by generating revenues and jobs for more than 20 million people in Africa alone. Cotton is the second-largest exported crop globally, surpassing staple crops like wheat, maize and rice. African economies export over 90 per cent of their annual cotton production. Benin, Burkina Faso, Chad and Mali, the so-called Cotton-4 economies, are the leading cotton producers and exporters of the African continent, together accounting for 3 per cent of total world cotton production and around 8 per cent of world cotton trade, while cotton trade makes up between 3 and 10 per cent of their national GDP (FAO, 2022).

The critical importance of the cotton sector for many vulnerable developing economies, which are competing with high-income economies on the world market, is fully acknowledged in the WTO. WTO discussions on the topic follow two tracks: trade aspects addressing distorting subsidies and trade barriers for cotton, and development assistance for cotton production and its value chain.

The 2015 Ministerial Decision on cotton prohibits the use of export subsidies and calls for a further reduction in domestic support for cotton producers. Developed and developing members in a position to do so also agreed to grant duty-free and quota-free market access for cotton and cotton-related products from LDCs. While the value of imported cotton from LDCs grew at an average annual rate of 6 per cent between 2016 and 2022, the LDC share in total cotton imports declined from 9 to 8 per cent during the same period, although with significant fluctuation. Government support for cotton, including minimum support prices and direct support to producers, remain high, particularly in several developing economies. Globally, these support measures amounted to over US\$ 8 billion in 2022 and 2023 (ICAC, 2023).

In parallel, recent years have seen increased cotton-specific development assistance. In 2023, over 55 per cent of total cotton-specific assistance was directed to the Cotton-4 economies. Initiatives such as the WTO-International Federation of Association Football (FIFA) initiative “Partenariat pour le Coton” and the UN World Cotton Day seek to increase cotton transformation and investment further.

could have mixed effects. It could reduce agricultural incomes in high- and middle-income economies, but slightly raise them in low-income economies by creating new export opportunities. However, the effects are estimated to be modest, with average farm incomes increasing by 0.33 per cent relative to a baseline (Glauber and Laborde, 2022).

International cooperation is needed to discipline or discourage the use of export restrictions and tariff escalation that affect trade in raw materials and to find alternative approaches.

As discussed in Chapter B, tariff escalation and export restrictions are prevalent in natural resource sectors, where raw materials face lower duties compared to their processed forms, while exports are often restricted. Both export taxes and tariff escalation can be “beggar-thy-neighbour” strategies, meaning that governments manipulate export prices (terms-of-trade effect) or promote domestic processing at the expense of foreign production (production relocation effect) (Latina, Piermartini, and Ruta, 2011). While tariffs are strictly regulated by the WTO, export duties are not (WTO, 2010). Clarifying the appropriate use of export restrictions on critical materials would reduce policy uncertainty and risks in GVCs. Greater transparency and information-sharing would also help firms to assess production capacities better and avoid bottlenecks (WTO, 2021b). Tailored technical assistance and capacity-building programmes, focusing on specific sectors with competitive advantages and offering individualized assistance to firms based on their unique needs, could help firms in developing economies to move up the value chain and export more processed goods. Implementing robust monitoring and evaluation mechanisms, coupled with continuous feedback loops from beneficiaries, can help to refine and improve the technical assistance programmes.

Uncoordinated trade-related environmental policies can inadvertently impact the export capabilities of developing economies.

In the absence of internationally coordinated environmental policies, the adoption by individual economies of stringent environmental measures can prompt firms to relocate to regions with lower environmental standards, increasing the risk of so-called pollution havens and carbon leakage (i.e., when firms transfer production from economies with stricter climate policies to economies with laxer policies on carbon emissions). Trade-related strategies to address carbon leakage, such as carbon border adjustments, may inadvertently impede the export capabilities of developing economies striving for manufacturing-led economic growth, and thus hamper economic

convergence. Such measures can lead to trade tensions and increased trade barriers (WTO, 2022).

International cooperation on environmental policies is essential to ensure coherence between environmental and trade policies and to prevent that policies hamper economic convergence.

In the WTO, the revitalization of work in the Committee on Trade and Environment and progress in the environmental initiatives (Trade and Environmental Sustainability Structured Discussions (TESSD), Dialogue on Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade (DPP) and the Fossil Fuel Subsidy Reform (FFSR) initiative) can support good practices as well as coherent and fit-for-purpose trade-related environmental policies. Efforts have been initiated at the international level to foster collaboration, develop relevant international standards and enhance coherence in national approaches to climate change. The WTO, in collaboration with the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), United Nations Trade and Development (UNCTAD), the United Nations Framework Convention on Climate Change (UNFCCC) and the World Bank, has launched a joint task force on the alignment and coordination of carbon pricing and other climate mitigation policies.

(iii) Supporting the implementation of WTO agreements

International trade cooperation can help low-income economies to overcome the challenges that hinder them from implementing their trade agreements.

As discussed in Chapter B, low-income economies often face difficulties in implementing trade agreements due to limited financial resources, weak institutional capacity and infrastructural deficits, which impede their participation in international trade. The WTO, through S&DT flexibilities and other initiatives, and collaboration with other international organizations, can help address these obstacles by assisting low-income economies in meeting SPS and TBT requirements and in implementing specific WTO agreements, such as the TRIPS Agreement or the TFA.

More work on S&DT implementation in the TBT and SPS agreements is needed.

The implementation of S&DT provisions in the TBT and SPS agreements has been receiving greater attention, as compliance with TBT and SPS measures can be particularly burdensome for producers in low-income economies. Over the years, several developing members, notably in the G-90 group, have proposed modifying S&DT provisions to help exporting firms in developing economies adapt more easily to new TBT and SPS measures adopted

by developed economies.¹⁰ As part of the efforts to make S&DT provisions in WTO agreements precise, effective and operational, a Ministerial Declaration on the implementation of S&DT provisions in the TBT and SPS agreements was adopted at the 13th Ministerial Conference in 2024. The Declaration calls for various improvements, including training and technical assistance, and increased transparency in notifications, including information about extensions to comment periods. Work is continuing at the WTO to enhance the implementation of S&DT for developing members, including LDCs, in the SPS and TBT Agreements.

Full implementation of the TFA could boost the participation of LDCs in trade. National trade facilitation committees (NTFCs) and implementation roadmaps are essential to accelerate the implementation of the TFA in low-income economies. Despite the extensive flexibilities provided by the TFA, and the efforts of low-income economies to implement it, these economies face specific challenges due to capacity constraints, resource limitations and technology gaps. These constraints are reflected in their lower implementation rate, as discussed in Chapter B. Helping low-income economies to implement the TFA fully could, potentially, increase their exports significantly. In 2014, the Trade Facilitation Agreement Facility was created to assist developing and LDC members in fully implementing the WTO TFA. NTFCs are crucial for trade facilitation reform, as they coordinate efforts among various stakeholders, including customs, government agencies and the private sector. Other important contributing factors include a working, cooperative partnership with the private sector, and an active and sustained relationship with development partners and contributors. In this context, implementation roadmaps and strategic plans can assist governments in complying with implementation dates and accelerate implementation, while enhancing transparency among stakeholders and helping to secure the necessary support from contributors and development partners for trade facilitation reforms.

Greater collaboration among development partners, international agencies and non-governmental organizations is needed to accelerate TFA implementation in low-income economies. Following several years of decline, Aid for Trade commitments on trade facilitation rebounded significantly, with a 150 per cent increase between 2021 and 2022, almost reaching levels preceding the COVID-19 pandemic, at US\$ 471 million. However, disbursements for trade facilitation have declined in recent years, reaching US\$ 252 million in 2022, which was slightly lower than disbursement levels in the

2010s (OECD and WTO, 2024). While strengthening trade-related infrastructure in low-income economies remains a priority, improving digital connectivity is crucial to address the digital divide and accelerate TFA implementation efforts.

The S&DT provisions of the TFA mark a significant shift from the WTO's traditional approach of granting flexibilities and can serve as a blueprint.

The TFA stands out by providing a comprehensive flexibilities package without exemptions, unlike other WTO agreements that typically offer longer transition periods or exemptions to developing members. Notably, the TFA introduces a conditional link between implementation capacity and commitment requirements, allowing developing economies and LDCs to establish their own implementation timetables based on their capacity (WTO, 2015). It sets general principles and detailed instructions for the operation of flexibilities, and includes additional flexibilities for LDC members, emphasizing the need for assistance and support for capacity-building. In that context, the TFA also incorporates built-in flexibilities in its technical provisions, such as conditioned obligations and best-endeavour obligations. The approach to S&DT of the TFA has already inspired the S&DT provisions of the recently finalized plurilateral Investment Facilitation for Development Agreement and they could further serve as a blueprint for other agreements.

Greater support could help ensure that low-income economies can implement an IP regime that responds to their needs.

The way in which economies chose to implement international IP standards domestically impacts the accessibility of IP protection for inventors, artists and businesses. As discussed above, the TRIPS Agreement requires the implementation of minimum standards for IP protection and enforcement, while allowing considerable flexibilities, such as possible exceptions to substantive IP rights, procedures and formalities for acquisition and enforcement, administrative organization of IP registration systems, and the selection of government agencies to exercise discretion and authority. Poor implementation choices can undermine the benefits of an IP protection system, resulting, for instance, in unnecessarily large financial and procedural costs. Unclear procedures and responsibilities can also limit the use of legitimate TRIPS flexibilities, such as government use or compulsory licensing of patents, making it difficult for domestic authorities to address IP abuse or overreach.

Low-income economies can take several approaches to maximize the benefits of IP

protection. These include investing in education and training to build a skilled workforce capable of leveraging IP for economic growth, developing infrastructure to support innovation, such as R&D facilities and technology parks, and engaging in international cooperation to benefit from technology transfer and global best practices in IP management (Ernst, Guderian and Richter, 2022).

A considerable array of technical assistance is available to support developing economies in designing and implementing balanced and workable IP systems. Various organizations, including the WTO, the World Intellectual Property Organization (WIPO), and other international entities, help developing economies navigate the complexities of IP protection and enforcement.¹¹ To help and empower developing economies to exercise legitimate TRIPS flexibilities in their domestic IP systems where they see fit, WTO members have also taken joint action to clarify and confirm the availability of TRIPS flexibilities at the international level and expand them. Relevant instruments include the 2001 Declaration on the TRIPS Agreement and public health,¹² the Special Compulsory Licensing System that became a permanent part of the amended TRIPS Agreement in 2017, and, more recently, the 2022 Ministerial Decision on the TRIPS Agreement, clarifying and streamlining options for access to COVID-19 vaccines. These instruments contribute to providing agency to LDCs in crafting balanced and effective IP systems tailored to their specific needs.

Innovative Aid for Trade financing is critical as traditional development finance is under stress. In a post-pandemic world with geopolitical tensions, rising debt burdens and a need for urgent climate action, governments, international organizations and financiers are increasingly navigating budgetary constraints as they mobilize funds to address these multifaceted crises. Developing economies and LDCs anticipate a continued need for Aid for Trade to support their integration into the global economy. Amidst traditional development finance challenges, modern Aid for Trade requires new models and approaches to meet the increasing demands of developing economies. Innovative financing mechanisms can complement traditional official development assistance and public funding to support trade integration and development efforts. Key strategies to unlock new funding sources include leveraging private sector investment through public-private partnerships and blended finance, utilizing innovative financial instruments such as development impact bonds and guarantees. Moving forward, concerted efforts are necessary to ensure that the Aid for Trade

initiative continues to support a more inclusive, resilient and sustainable global trading system. The EIF, which is the only LDC-focused Aid for Trade programme, has an important role to play in these efforts.

(vi) Tailoring exemptions to the needs of developing economies and LDCs taking into consideration the importance of commitments

Developing countries are advancing the S&DT negotiations under the coalition of the G-90. At present the G-90 has put forward 10 agreement-specific proposals to amend S&DT provisions to support the industrialization efforts of developing economies and LDCs, while minimizing the risk of legal retaliation by other members.¹³ The proposal includes a simplified procedure for applying trade restrictions in development programmes under Article XVIII of the GATT 1994. The G-90 also proposes a temporary, time-bound deviation from some of the disciplines set out in the TRIMS Agreement, including the prohibition to discriminate against imported products and implement quantitative restrictions on imports or exports when adopting investment measures. In addition, the proposal would exempt LDCs from the obligations of the TRIMS Agreement for as long as they are classified as LDCs.

A comprehensive analysis of potential changes to S&DT provisions could contribute to improving their effectiveness in supporting development through trade. Achieving a delicate equilibrium between flexibilities, in particular those that require more policy space, and commitments is crucial in order to preserve predictability, a policy aspect that is often lacking or limited in developing economies. Proposed flexibilities could be evaluated based on economic arguments in favour of S&DT, such as a low level of technology, market failures and financial constraints specific to lower-income economies, or a concentrated production structure (see Section D.1(a)). Assessing the ease of using S&DT provisions based on a legal and historical analysis of their past use can provide useful insights. Similarly, analysing the economic impact of S&DT proposals while taking into account the specific circumstances of the targeted economy can inform the discussions. In that context, reviewing the available empirical evidence on the effectiveness of measures permitted by the proposed S&DT flexibilities is important. For instance, and as discussed in Chapter B, empirical evidence on industrial policy, in particular local content requirement, remains mixed (Juhász, Lane and Rodrik, 2023). Finally, assessing the potential effects of the proposed S&DT flexibilities on other WTO members can help identify their potential economic importance.

However, the potential of such thorough analysis to facilitate progress in S&DT talks remains uncertain. The results of the comprehensive analysis discussed above may differ significantly from one economy to another, with cross-border spillovers of policy interventions likely to increase with economic size and level of development. Members have different views on whether to define sub-categories of developing economies as a means to providing more tailored S&DT flexibilities while minimizing potential adverse effects on other economies. Some members argue that development is a multi-faceted process that is very difficult to quantify. They further contend that each developing economy has the inherent right to decide independently when, where, and how to use S&DT provisions, based on its unique circumstances. For example, in the Ministerial Decision on TRIPS and COVID-19 vaccines, developing members with existing capacity to manufacture COVID-19 vaccines are encouraged to make a binding commitment not to avail themselves of this Decision. This approach where certain developing countries voluntarily opt out of using specific flexibilities could serve as a blueprint for addressing the thorny issue of increased commitments, while devising more tailored S&DT provisions. As discussed above, the TFA approach to S&DT is also a potentially viable way to balance commitments and flexibility.

2. Making the WTO and trade more inclusive for people and firms

Trade inclusiveness within economies seeks to ensure that the benefits and opportunities of the WTO and trade are accessible to all individuals and businesses. In particular, these benefits should be extended to all those who have traditionally been marginalized or excluded. Marginalized groups include women, children, the elderly, people with disabilities, ethnic and racial minorities, sexual minorities, indigenous peoples, refugees and low-income individuals. In the labour market, vulnerable workers include low-wage, informal, casual or contingent workers and migrant workers. Ensuring that the WTO and trade are more inclusive also means creating a more equitable global trading system by addressing barriers that prevent disadvantaged groups from participating fully in international markets. Micro, small and medium-sized enterprises (MSMEs) are considered to be among these disadvantaged groups because they are typically owned and operated by small business-owners, including a significant number of women, and often face certain specific challenges, such as limited

access to capital, resources and markets compared to larger, more established companies.

Issues related to poverty reduction, inequality and inclusiveness have repeatedly been raised in the WTO. The preamble of the Marrakesh Agreement Establishing the WTO recognizes raising standards of living and real income, and ensuring full employment and sustainable development as central objectives of the multilateral trading system. The aim of WTO disciplines is largely to minimize the negative effects of trade policies on trading partners and to increase the economic benefits resulting from more trade openness. Addressing the distributional effects of trade within each economy is the responsibility of individual governments, by means of domestic policies, including adjustment and redistribution policies (WTO, 2017). Thus, the increased focus on inclusiveness within the WTO is driven partly by concerns that rising inequality and the perception that trade is leaving certain groups behind could lead to a backlash against trade.

Trade and trade policies can have notable distributional effects, and the WTO, by promoting trade, can contribute to these effects.

As discussed in Chapter C, the impact of trade and trade policies on inclusiveness can differ significantly between economies, and empirical evidence on the impact of the WTO remains relatively limited. Some WTO accessions have been shown to impact employment and wages, and in some cases reduce poverty, and there is evidence of the distributional effects of certain WTO agreements. Apart from this evidence, however, there is an unfounded perception that the multilateral trading system systematically favours larger companies over MSMEs.

(a) Inclusiveness of people and firms is increasingly taken into consideration at the WTO

Incorporating inclusiveness into the WTO's operations can contribute to creating a more fair and equitable global trading system. WTO disciplines offer policy space for governments to promote social inclusion and to address the possible adverse labour market impacts of trade. In recent years, initiatives have been launched by some member groups to promote trade-related social inclusion, notably of women and MSMEs. By addressing the participation and inclusion in trade of marginalized groups and MSMEs, as well as aligning its work with the UN Sustainable Development Goals and engaging with stakeholders, the WTO is supporting efforts to share the benefits of trade more widely and to contribute to sustainable and

inclusive economic growth. However, further research is necessary to evaluate the direct and indirect effects of the WTO on inclusiveness.

(i) WTO accession can contribute to poverty reduction

Accession to the WTO is associated with a reduction of poverty in acceding economies. As discussed in Section D.1, empirical evidence confirms that GATT/WTO membership has a positive impact on economic growth through the reduction of trade barriers. The WTO commitments that these economies make also enhance good governance and the predictability of their market access conditions, which in turn contribute to economic growth, an important engine of poverty reduction. Poverty reduction has, on average, been more marked in economies that have acceded to the WTO since 1995, and that have made substantial commitments, including structural reforms, under Article XII of the Marrakesh Agreement, compared to original developing GATT contracting parties that became WTO members pursuant to Article XI of the Marrakesh Agreement (see Figure D.10). For instance, China's accession to the WTO in 2001 resulted in welfare gains for nearly all households across various income levels, with a strong pro-poor distributional effect (Han et al., 2016).

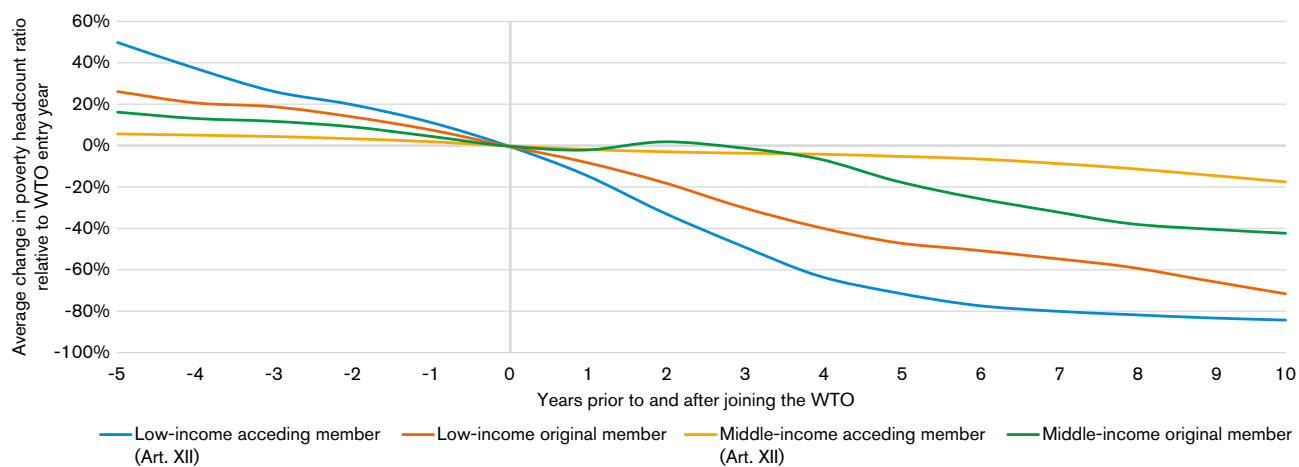
Further research on the impact of WTO membership on poverty reduction would be valuable to identify and quantify specific mechanisms. The empirical evidence on the causal impact of GATT/WTO accession on poverty and

other distributional outcomes in acceding economies is limited and only captures the effect of tariff reductions (Fan, Lin and Lin, 2020; Erten and Leight, 2021; Zhou and Zhang, 2021; Greenland, Lake and Lopresti, 2024). The studies available tend to overlook broader accession-related reforms and policy changes, including services market-opening and the implementation of various policies and institutional reforms. Reforms undertaken during the process of WTO accession have a positive impact on economies, and may have a potentially direct effect on poverty.

(ii) WTO disciplines do not restrict the use of most domestic inclusion policies

Nothing in the WTO agreements restricts the use of non-discriminatory domestic adjustment and of social and redistribution policies to address the distributional impact of trade. Adjustment policies, such as active (e.g., training and job search assistance) and passive labour market policies (e.g., unemployment insurance) do not discriminate against imports, and typically have no trade-related cross-border spillovers (WTO, 2017). Policies that enhance overall competitiveness, such as by improving education, infrastructure and the efficiency of financial markets, can also help to facilitate the reassignment of labour from contracting industries facing import competition to expanding sectors with a comparative advantage. Similarly, social protection and redistribution measures can be used to compensate for possible adverse effects of income loss due to trade or technological changes, as discussed in Chapter C.

Figure D.10: Association of deeper WTO commitments with greater poverty reduction



Source: Authors' calculations, based on World Bank data on poverty and WTO data on membership date.

Note: The figure displays the average percentage change in the share of the population living on less than US\$ 2.15 a day at 2017 purchasing power adjusted prices relative to the poverty headcount ratio in the year when the economy joined the WTO. The average change in poverty headcount ratio is weighted by the share in the world poverty headcount ratio. Year 0 corresponds to the year of accession to the WTO, which is 1995 for original (non-Article XII) members. Only economies that were low-income and middle-income at the time of joining the WTO are considered. The income groups are based on the 2022 World Bank's classification.

Other trade-distortive domestic instruments used to manage the distributional impact of trade are subject to WTO disciplines. Tariffs or subsidies may sometimes be used to protect jobs at risk from import competition, just as export restrictions may be implemented during food crises to protect vulnerable populations. Policy space can be used by members to implement discriminatory measures to promote domestic inclusiveness, including poverty reduction, for instance by relying on exceptions relating to the protection of public morals.¹⁴ WTO rules also include safeguards to address situations in which a member determines that imports of a product, in significant quantities and under certain conditions, are causing or threatening to cause serious injury to the domestic industry producing similar or directly competitive products. Finally, governments always have the possibility of renegotiating a concession. However, this flexibility needs to be weighed up against the benefits of making commitments that can help, in the long run, to reduce poverty by promoting economic stability and predictability.

(iii) Different WTO provisions can benefit some vulnerable groups

While some WTO agreements explicitly address aspects of inclusiveness, a number of WTO provisions that do not mention it can still support it. For example, several WTO provisions explicitly refer to MSMEs. The Anti-dumping Agreement and the Agreement on Subsidies and Countervailing Measures (SCM) recognize that the evidentiary burden of investigations may impede MSMEs in attempts to file complaints or to respond in anti-dumping or countervailing duty investigations, and thus require that investigating authorities take these constraints into account. The TRIPS Agreement gives WTO members leeway to promote the technological development of their MSMEs. The TFA explicitly requires members to consider the specific needs of MSMEs requesting advance rulings on the treatment of imported goods, and also requires that members not restrict MSMEs from being made eligible to be “authorized operators”, provided that they meet specified criteria.¹⁵ The new disciplines on services domestic regulation aim to cut trade costs and facilitate services trade, especially for the benefit of small businesses. Among others, the disciplines include the first gender provision in a WTO agreement, which prohibits gender discrimination when a participating member is authorizing the supply of services. More generally, many other WTO provisions can contribute to advancing inclusiveness, even when they do not explicitly target specific vulnerable groups.

A number of provisions in the WTO Agreement on Agriculture aim to contribute to food security, which is of particular importance to certain low-income groups. Agriculture forms the backbone of many low-income economies, providing employment, food security and a significant portion of GDP, while also supporting livelihoods and sustaining rural communities. Women contribute significantly to the agricultural economy, particularly in developing economies, often through small-scale, subsistence farming that supports their families’ livelihoods. The Agreement on Agriculture exempts several support measures from ceilings on domestic support (including through its Annex 2, known as the “Green Box”, which exempts certain support programmes that cause no more than minimal distortion to trade and production). Green box programmes include domestic support for general services – such as rural infrastructure, pest and disease control, training and extension and advisory services – as well as natural disaster relief, environmental programmes and regional assistance programmes. Developing members are also given special treatment with respect to public stockholding programmes for food security purposes, while all WTO members are allowed to provide unlimited support for domestic food aid to people in need. The Ministerial Declaration on the Emergency Response to Food Insecurity and the Ministerial Decision on World Food Programme Food Purchases Exemptions from Export Prohibitions or Restrictions,¹⁶ adopted at the 12th Ministerial Conference, express the determination of WTO members to make progress towards ending hunger and achieving food security and improved nutrition, and commits them to take “concrete steps” to facilitate trade and improve the functioning and long-term resilience of global markets for food and agriculture.¹⁷ The declaration also states that emergency measures introduced to address food security concerns should minimize trade distortions and be temporary, targeted and transparent, as well as being notified and implemented in accordance with WTO rules. Members imposing such measures should also take into account their possible impact on other members, in particular on LDCs and net food-importing developing economies.

The WTO Agreement on Fisheries Subsidies, adopted in 2022, recognizes the needs of fisherfolk in developing economies and LDCs. Fisherfolk in low-income economies typically operate on a small scale with traditional methods, face economic vulnerability due to low and irregular incomes, have limited access to resources and markets, and depend heavily on natural resources

and community support, as they are likely to lack adequate social protection. The Agreement on Fisheries Subsidies sets new global rules to curb harmful subsidies and protect global fish stocks. It grants developing economies a grace period with regard to prohibiting subsidies for illegal, unreported and unregulated fishing and overfished stocks, and includes a due restraint clause to members to exercise caution and restraint when raising matters involving an LDC member. It also provides for technical assistance and capacity-building, including the creation of a fund to help developing members implement the agreement. For the Agreement to become operational, two-thirds of WTO members have to deposit their “instruments of acceptance” with the WTO.

The TFA can benefit MSMEs by simplifying and streamlining international trade procedures and improving information availability. Compliance with border procedures commonly features among the most important obstacles faced by MSME exporters (ITC, UNNEXT, and UN-ESCAP, 2016). As discussed in Chapter B and in Section D.1, the TFA lowers transaction costs and minimizes delays at borders by reducing red tape and enhancing the efficiency and transparency of customs processes. These facilitation improvements can make it easier and more cost-effective for MSMEs to expand their market reach, compete more effectively with larger firms, and integrate into global supply chains, thereby fostering economic growth and development. Empirical evidence points to a stronger probability of MSMEs exporting after enhancing trade facilitation measures (de Dios, 2009; Li and Wilson, 2009; Son and Son, 2011; Hoekman and Shepherd, 2013; 2015). In particular, more recent analysis finds that the TFA mainly benefits MSME trade by improving information availability, while other trade facilitation measures, such as advance rulings, appeals procedures and the automation of border formalities, tend primarily to benefit larger exporters (Fontagné, Orefice, and Piermartini, 2020). This suggests that trade facilitation measures may impact exporters beyond the fixed or variable cost components of red tape barriers.

(iv) Discussions on inclusive trade and trade-related technical and capacity-building initiatives are gaining traction in the WTO

Discussions on inclusive trade, specifically focusing on MSMEs and women, have gained significant importance in different WTO committees and working groups. For instance, the 1998 Work Programme on Electronic Commerce has a prominent MSME focus, examining how MSMEs

might best take advantage of e-commerce. Likewise, the Joint Initiative on E-commerce seeks to take into account the particular needs of MSMEs with regard to e-commerce. The Committee on Government Procurement is implementing a treaty-mandated work programme to support the participation of small and medium-sized enterprises in government procurement. The work programme has produced a report listing best practices for promoting and facilitating the participation of SMEs in government procurement. Discussions on MSMEs are also occurring in other committees, such as in the TRIPS Council with a focus on support for MSME innovation.

In recognition of the specific needs of MSMEs and businesses owned by women, informal working groups among like-minded members on MSMEs and on Trade and Gender have been established. In addition to providing policy guidance, the Informal Working Group on MSMEs endeavours to develop concrete tools to support the participation of MSMEs in international trade. For example, it developed the Trade4MSMEs platform, which includes step-by-step trade guides for MSMEs and policymakers. Meanwhile, the Informal Working Group on Trade and Gender seeks to promote women’s participation in global trade by sharing best practices, exchanging views on how to apply a “gender lens” to the work of the WTO, reviewing gender-related WTO reports, and discussing how women can benefit more from the Aid for Trade initiative.

Poverty reduction, women’s economic empowerment and MSMEs’ participation are increasingly being integrated into Aid for Trade programming. Key strategic objectives that emerge strongly in national development strategies are poverty reduction, women’s economic empowerment, gender equality and job creation, which are also increasingly reflected in Aid for Trade priorities (OECD and WTO, 2024). These priorities highlight a commitment among Aid for Trade stakeholders to working towards poverty eradication and more inclusive trade. For instance, the Women Entrepreneurship for Africa (WE4A) initiative, launched by the European Union in collaboration with several national development agencies, regional banks, international organizations and private companies, provides women entrepreneurs with training, technical support and opportunities to access finance at every stage of their business growth.

The Enhanced Integrated Framework (EIF) helps LDCs participate in international trade, contributing to poverty reduction and women’s economic empowerment, among other benefits. The EIF assists LDCs and economies that have recently

graduated from LDC status to mainstream trade into their own development plans, thereby improving their opportunities to create trade-led inclusive and sustainable growth, and it places a strong emphasis on inclusivity, specifically targeting greater inclusion of women, young people and MSMEs. For instance, in 2016 the EIF worked with the National Association of Smallholder Farmers (NASFAM) in Malawi to introduce an innovative skills-building process for smallholder farmers – many of them women – resulting in a 48-percentage-point increase in mechanized farming and a 160 and 280 per cent rise in average incomes for groundnut and soya bean farmers, respectively, which contributed to reducing incidences of poverty among beneficiaries from 56 per cent to 37 per cent. The project also facilitated the exports of US\$ 2.3 million worth of groundnuts and soya beans to regional markets.

Trade finance facilitation programmes can significantly benefit and enhance international trade for MSMEs and women traders. Many economies and businesses, in particular in developing economies, suffer from inadequate access to trade finance, which causes them to miss out on economic and development opportunities. Trade finance requests by MSMEs and businesses led or owned by women face disproportionately high rejection rates. Trade finance facilitation programmes provided by regional or multilateral development agencies and financial institutions aim to reduce the risks and improve the accessibility of trade financing for exporters and importers, particularly in emerging markets, by offering guarantees and credit enhancements. For instance, the Asian Development Bank's Trade Finance Program¹⁸ provides loans and guarantees through partner banks in Asia and the Pacific.

The Standards and Trade Development Facility (STDF) contributes to facilitating safe and inclusive trade. Established by the Food and Agriculture Organization (FAO) of the United Nations, the World Organisation for Animal Health (WOAH), the World Bank, the World Health Organization (WHO) and the WTO, the STDF aims to help developing economies build the necessary capacity to meet international standards for food safety and animal and plant health. This enhanced ability to engage in regional and international trade contributes to more sustainable economic growth, poverty reduction and improved food security in developing economies. STDF projects are increasingly addressing women's economic empowerment, as key lessons from past projects highlight the importance of promoting women's engagement at all levels, including senior management and project teams. Projects targeting women farmers in

cooperatives also help to enhance their knowledge and decision-making for safe fruit and vegetable exports.

(b) The WTO can be made more conducive to inclusive trade and growth for people and firms

While the WTO is committed to promoting inclusive trade, there is still room for further progress. If trade is to continue to foster opportunities and growth in order to increase inclusiveness, international trade cooperation must be strengthened in light of growing geopolitical tensions, the digital revolution and the need for sustainability. This can be achieved by building a more fair and inclusive multilateral trading system, strengthening information-sharing on inclusive trade policies and improving the effectiveness of technical assistance.

(i) Strengthening the WTO and updating its rulebook to make trade more inclusive

Re-globalization through strengthened international cooperation centred on the WTO could help to reduce poverty in less integrated and diversified economies. Trade fragmentation poses a significant risk to the progress made in reducing poverty and inequality (WTO, 2023c). While some might benefit from a reorientation of GVCs, vulnerable groups, in particular low-income households, are likely to experience greater hardships due to rising economic instability and trade costs. A reformed WTO with a fully functioning dispute settlement mechanism, to ensure a fair, transparent and predictable trading environment, holds the potential to help promote trade and growth in countries that have not yet succeeded in harnessing trade to develop their economies. Given that an important share of the populations of many of these economies are living in poverty – the share of the population living in extreme poverty is 44 per cent on average in low-income economies, compared to 10 per cent on average across all economies – re-globalization has the potential to contribute to poverty reduction.

Stronger multilateral cooperation can also help ensure that more firms and more workers, including women and workers from disadvantaged groups, can participate in and benefit from trade. Digital trade holds the potential to make trade more inclusive, while international initiatives leveraging the specific expertise of different international organizations could catalyse digital trade to make it more inclusive, not only for less integrated economies, but also for MSMEs and women (IMF et al., 2023; WTO, 2023c). Similarly, more open and predictable services markets are not only key to fostering services-led development, they can also improve the participation of women and

MSMEs in the economy (WTO, 2023c). Combining market-opening negotiations with international cooperation on regulatory issues could help to harness the potential of services trade further, both to foster services-led development and to strengthen the participation of women and MSMEs in trade. Implementation of the agreement on services domestic regulation, for example, could save businesses, especially small businesses, US\$ 150 billion a year globally (OECD and WTO, 2021). Full implementation of the TFA, or multilaterally negotiated reductions of tariffs and NTMs, would benefit MSMEs relatively more than larger firms. Beyond the measures discussed in Section D.2(a), the reduction of trade-distorting domestic support, which is concentrated in only a few economies and is generally provided to large producers, could also open new market opportunities for low-income producers (WTO, 2023c).

(ii) Strengthening information-sharing on making trade policies more inclusive

Information-sharing, discussion of best practices, and data collection and analysis can facilitate the inclusive implementation of WTO agreements. One of the core functions of the WTO – and one that is often taken for granted after 70 years of multilateralism – is that it provides a forum for members to discuss and exchange views on trade-related issues. For instance, discussions in the TRIPS Council provide information on the various IP-related initiatives taken by WTO members to support their MSMEs. Similarly, the Informal Working Group on MSMEs compiled information on measures taken by members to help MSMEs benefit from Authorized Economic Operator (AEO) programmes, an important issue for MSMEs, given that they have difficulties in meeting AEO criteria.¹⁹ Another example is the trade and gender dimension, which is gradually making its way into Trade Policy Review Body (TPRB) discussions, mainly through the voluntary provision of relevant information in trade policy review reports prepared by members and their statements at TPRB meetings (World Bank and WTO, 2020).

Discussions on inclusiveness and information-sharing in the WTO need to be informed by more and better data and analysis. Members' notifications of trade measures (e.g., concerning agriculture, goods, services, SPS, TBT and trade facilitation) could become a vehicle for voluntary information-sharing on domestic policies on inclusiveness, including poverty reduction and labour standards, which could contribute to raising awareness and fostering discussions in different WTO committees. The WTO could encourage and possibly coordinate efforts to collect relevant data and to

conduct analysis to inform discussions. Aggregated data can mask the specific effects of trade policies on some vulnerable groups, highlighting the need for more disaggregated data to assess the impact of tariffs and NTMs at the individual level. While there is some evidence that current tariff profiles discriminate against low-income individuals and women, and that NTMs discriminate against SMEs, the data needed to conduct such analysis are not systematically collected. Trade-related data on certain vulnerable groups, such as persons with disabilities and indigenous peoples, is scarce.

Increased participation of representatives from vulnerable groups would enhance WTO discussions on making trade policy more inclusive. Public scrutiny is an essential aspect of the functioning of any modern international organization that deals with public goods. The WTO Secretariat engages in various outreach initiatives to foster stakeholder participation and promote transparency in global trade discussions. The WTO Public Forum serves as the largest annual outreach event, and provides a platform for stakeholders worldwide to discuss the latest developments in trade. In addition, the WTO Secretariat organizes events such as the Parliamentary Conference on the WTO, Trade Dialogues, and regional and Geneva-based seminars to engage with parliamentarians, business leaders, civil society representatives and the media. More recently, the WTO Director-General set up a civil society group and a business advisory group, in part to remove any suspicion of secrecy or bias within the organization. These advisory groups provide an informal platform to share views and debate the work of the WTO. WTO members also recognize the importance of engaging stakeholders for inclusive trade policy-making, with some suggesting modifications to the WTO's stakeholder work, while others favour stakeholder involvement at the national level.

Actively involving vulnerable groups can make the implementation of WTO commitments more inclusive by ensuring that their perspectives and interests are taken into account in the decision-making process. The TFA serves as a noteworthy example of how trade policy can become more inclusive by involving representatives from groups that may face discrimination in policy implementation. As discussed in Section D.1, the agreement requires the establishment of NTFCs to facilitate both domestic coordination and the implementation of its provisions. Past experiences show that effective NTFCs are responsive to the diverse needs of both private and public sectors. In that context, NTFCs can promote more inclusive trade facilitation by establishing regular engagement with representatives from vulnerable groups, either through ongoing

consultations or more formal arrangements (e.g., working groups). They can support vulnerable groups by providing access to relevant trade information and to capacity-building and training opportunities. NTFCs can also advocate for these groups in national trade policy discussions to promote inclusive and equitable policies. Sustained government support and resources are, however, essential for NTFCs to achieve effective and inclusive trade reforms.

(iii) Increasing support to making trade more inclusive

There are a number of areas in which greater cooperation at the multilateral level could contribute to more inclusive trade. They include sustained efforts to further improve access to information, more extensive and well-coordinated capacity-building on MSMEs and gender through technical assistance, including Aid for Trade, and enhancing access to finance for MSMEs, in particular for businesses led or owned by women. For example, the WTO and the International Trade Centre (ITC) launched a Women Exporters in the Digital Economy (WEIDE) Fund to assist businesses led by women, as well as entrepreneurs in developing economies and LDCs, to adopt digital technologies and enhance their online presence.

In a context of increasing geopolitical tensions and climate change, the WTO could increase its efforts to support food security in different ways. It could more systematically use the Working Group on Trade, Debt and Finance to examine specific concerns raised in the food security discussions about the financing of food imports, which is particularly relevant for LDCs and net food-importing developing economies. More focused discussions on identifying strategies and mechanisms to mitigate and minimize the adverse effects of export restrictions on importing countries could enhance food security. Increasing Aid for Trade financing could help to improve agricultural productivity and infrastructure, and ultimately promote resilience and strengthen food security. Building new collaboration partnerships with other international and regional organizations and financial institutions could help to enhance transparency and promote the implementation of relevant WTO commitments.

3. Promoting inclusive development through enhanced international cooperation

While the WTO serves as the primary forum for cooperation on trade and trade policies, many development and inclusive policies are also

addressed through other forms of international cooperation, including at regional and bilateral levels. As highlighted in Chapters B and C, trade alone is not sufficient to achieve inclusive development. Instead, a range of complementary policies, including infrastructure, institutions, redistribution and competition policies are essential to ensure that trade works more effectively to foster inclusive development.

The globalization of the world economy led to growing interactions between economic policies pursued by individual economies. These include interactions between the structural, macroeconomic, trade, financial and development aspects of economic policymaking. Therefore, international cooperation in these areas is critical to ensuring that trade benefits all. These various forms of international cooperation complement the work of the WTO, particularly in the context of rising geopolitical tensions, the digital revolution and climate change.

(a) International cooperation to enhance economic resilience

In an increasingly interconnected world marked by geoeconomic tensions and uncertainty, international cooperation plays a crucial role in enhancing economic resilience. International cooperation can strengthen economic resilience through coordinated trade policies, reducing trade barriers and facilitating smoother cross-border transactions. This not only lowers transaction costs but also promotes predictability and stability in trade relations, essential for businesses navigating uncertain geopolitical landscapes. Enhancing economic resilience is also important to enable vulnerable groups to withstand and recover from economic shocks.

International cooperation can help governments to ensure that diversification policies are as effective as possible and that they do not have negative crossborder effects. Diversification reduces countries' exposure to country-specific demand-and-supply shocks, and governments can take various measures to diversify their economy. Multilateral and regional cooperation, in the form of various disciplines and initiatives, can contribute to diversification by ensuring that markets are open and predictable, and how international cooperation can help to ensure that industrial policies are not used to diversify at the expense of trading partners and of an efficient allocation of resources.

Promoting financial stability and reducing cross-border shocks requires special governance mechanisms and international cooperation.

Coordinated monetary policies and currency swap arrangements among central banks can provide liquidity buffers and stabilize financial markets during periods of volatility triggered by financial crises and geoeconomic tensions. In the aftermath of the 2008-09 global financial crisis, G20 initiatives led to the creation of the Financial Stability Board, which monitors assistance programmes provided to developing countries by multilateral institutions.

International cooperation also plays a role in assisting countries that are hit harder and/or lack resources and abilities to cope. The World Bank and the IMF provided substantial financial assistance to developing economies, which contributed to promoting economic activity, increasing reserves and liquidity, and fostering market confidence. The WTO mobilized various actors to cooperate on increasing trade finance availability and market conditions for both developed and developing economies.

(b) International cooperation to harness the digital transformation

Successfully harnessing the opportunities of the digital revolution requires international cooperation. As discussed in Chapters B and C, the digital revolution offers new opportunities for developing economies to explore trade opportunities, but leveraging digital technologies for inclusive development requires infrastructure investment, regulatory capacity building, and addressing the dominant market positions of large digital firms. Many of these areas necessitate international cooperation.

(i) Enhance infrastructure and digital connectivity

Infrastructure and digital connectivity are pivotal in enhancing trade capacity and lowering trade costs. Better infrastructure enables more economies to participate in and benefit from international trade, while mitigating domestic inequality by improving access to transportation, energy and the internet in rural and remote areas. Given the substantial investments required to modernize energy infrastructure and bolster digital connectivity, international cooperation is indispensable to enable developing economies to access the required financing and expertise. This is especially pertinent in economies where financial limitations and technological constraints often impede large-scale infrastructure projects. A secure and reliable information and communications technology (ICT) infrastructure is crucial for capturing the benefits of trade enabled by digital technologies, and can be a catalyst for economic growth. Traditionally, the

World Bank supports digital development focusing on expanding connectivity infrastructure (see, for example, World Bank and WTO, 2023b).

FDI plays a pivotal role in the development of digital infrastructure. In recent years, investment in the communications and semiconductor sectors has shown the most significant growth, while the software and information technology (IT) sector has remained stable for over a decade (UNESCAP, 2023). Key multinational enterprises involved in digital infrastructure and supporting digitalization in other sectors are driving advancements in telecommunications and digital technologies worldwide. The attractiveness of digital FDI is influenced by factors such as digital skills, venture capital availability, presence of innovation hubs, regulatory stability, and considerations regarding data security, privacy laws and IP regulations (Stephenson, 2020). Other drivers for attracting digital FDI include the use of international standards, the availability of e-payment services, and government support for starting a business and developing digital skills (UNESCAP, 2023).

Digital infrastructure development is underpinned by international trade in IT-related goods and services. The WTO's Information Technology Agreement (ITA) and its subsequent expansion are contributing to digital connectivity by eliminating tariffs on IT products covered by the agreement. Many of these products are critical components of the digital physical infrastructure. According to the 2017 Affordability Drivers Index (ADI),²⁰ four out of the top five economies that have the most affordable internet access – namely Malaysia, Colombia, Costa Rica and Peru – are all ITA participants. Colombia, Costa Rica and Malaysia are also participants in the ITA expansion. Opening services trade underpinned by multilateral rules can also ensure the access and affordability of telecommunication services.

Several international organizations are actively involved in initiatives that aim to support governments in bridging the digital divide. The UN is leading a High Impact Initiative on Digital Public Infrastructure,²¹ catalysing collective action to address this global challenge. UNCTAD's eTrade for All initiative aims to help developing countries harness the benefits of digitalization, focusing on improving access to digital tools and technologies, fostering digital entrepreneurship, and promoting inclusive e-commerce. The International Telecommunication Union (ITU) is championing numerous initiatives to

extend mobile telephony benefits across all societal strata, facilitating access to resources and providing platforms for knowledge transfer. In addition, a growing number of RTAs include provisions for cooperation on ICT infrastructure. Specifically, 64 RTAs contain provisions to promote ICT infrastructure development and diffusion, and address technical regulations, standards, and conformity assessment procedures related to ICT equipment (Monteiro, 2021b; Monteiro, Posada, and Tuthill, 2022).

Furthermore, international cooperation between the WTO and other IOs dealing with digital infrastructure and connectivity can be mutually beneficial. Trade can be made more inclusive if international cooperation help close the digital gap. At the same time, open trade and regulation can make investment in digital skills and infrastructure more beneficial. Research shows that open trade enhances the advantages of education and R&D activities (Ma, 2024).

(ii) Advancing a cohesive regulatory framework for digital development

A robust regulatory framework is essential to safeguard consumer interests and facilitate the adoption of emerging technologies. Ensuring that consumers are safeguarded from unfair practices, substandard products, and potential harm, fosters trust and confidence in the marketplace and contributes to address inequalities within economies. Similarly, fostering accessible and affordable new technologies can contribute to prevent a digital divide. Regulatory cooperation in intergovernmental and multi-stakeholder fora can help to develop international norms and standards, building trust and enabling more countries and firms to participate in international trade.

International cooperation plays a pivotal role in advancing a regulatory framework to foster inclusive trade. Because economies have diverse economic conditions and regulatory capacities, the establishment of shared standards can encourage mutual understanding and cooperation. Certain domestic policies, such as competition policies, can have important international ramifications when they are applied to multinational firms with global reach. Regulations adopted by large markets can influence global standards, a phenomenon known as the “Brussels effect” or “California effect” (Bradford, 2012). Effective management of the international spillover effects of certain domestic policies requires globally coordinated efforts to optimize their positive impacts.

While the WTO serves as a forum for regulatory cooperation, other regional and multilateral

institutions also play significant roles in promoting common regulations and standards in the digital realm. International cooperation through regional trade agreements facilitates trade among participating countries by establishing common frameworks and harmonizing regulations to streamline trade processes and reduce barriers to market entry (see opinion piece by Emanuel Ornelas). Organizations like the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) are crucial in developing standards, including those for digital technologies. The ITU supports the development of transparent and forward-looking legal and regulatory frameworks to stimulate ICT investment and promote universal, affordable and secure access to ICTs. In addition, the World Bank’s Digital Development Partnership, launched in 2016, assists developing economies in strengthening regulations and skills to leverage digital technologies.

(iii) Addressing dominant market positions in the digital economy

Effective competition policy and enforcement can play a pivotal role in promoting inclusiveness across and within economies. As discussed in Chapter B and C, higher corporate market power can result in a number of detrimental impacts on inclusive development, including higher firm profitability at the expense of consumers, discouraging innovation, and allowing firms to exercise power in the labour market to set lower wages (Autor et al., 2020) or limit the benefits from trade for low-income consumers suffering from a non-competitive distribution services sector (Schmitz, 2021). Markups charged by individual firms in high-income economies can also act like implicit tariffs on goods exported from lower-income economies (Ding, Lashkaripour and Lugovskyy, 2024). International cooperation on competition policies ensures a level playing field for businesses across borders, preventing anti-competitive practices and fostering fair competition. Regulatory cooperation can be complemented with technical assistance activities focused on the intersection of trade and competition policy, particularly in response to the needs of developing economies.

Robust competition policies are critical in the digital age, as digital technologies enable firms to reach global consumers even without a physical market presence. The global scope of digital firms necessitates cross-border collaboration among competition authorities. The digital sector is particularly prone to market concentration, due to substantial economies of scale and scope and strong network

Can regional and multilateral trade liberalization work in tandem?

By Emanuel Ornelas

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The World Trade Organization was established 30 years ago, following the conclusion of the Uruguay Round of trade negotiations, the world's last major advance in multilateral trade liberalization. Since then, progress has been sporadic and limited to specific areas. More troubling, since the financial crisis of 2008-09, the multilateral trading system seems to be moving backwards, with the propagation of discriminatory trade barriers and a growing number of trade disputes being left unresolved. Could a move toward deep regional trade agreements be a solution?

The world did not stop reducing trade barriers in 1995. The key difference was in the approach to trade liberalization, which transitioned from multilateral to preferential/regional. In the two decades following the establishment of the WTO, the number of regional trade agreements (RTAs) grew more than six-fold. Although the pace has slowed in the last decade, new RTAs are still being signed, with 371 currently in force.

Is this the way to go? Should we be comfortable with the near-paralysis of multilateral trade negotiations if trade continues to be liberalized through RTAs? For many years, the answer has seemed to be yes. Except for the European Union, which is unique in many ways, most other RTAs until the early 2000s were “shallow”, focusing primarily on eliminating bilateral trade barriers. While in theory the effect of those RTAs is ambiguous, the evidence shows that they created more trade than they diverted (Freund and Ornelas, 2010).

One key reason is that, as countries liberalized within the trading blocs outlined in the RTAs, they also (unilaterally) lowered trade barriers for countries outside those blocs. This suggests that tariffs for bloc insiders and outsiders are viewed as complementary: when one decreases, so does the other, albeit at a slower pace. The upshot is that the trade and welfare impact of RTAs have been much larger than studies prior to the formation of the agreements suggested.

More recently, RTAs have become increasingly “deeper”, tending to extend beyond the bilateral reduction of tariffs to include a wide range of non-tariff barriers and regulatory issues. While “depth” sounds benign, the jury is still out on the merits of these additional provisions – see, for example Fontagné et al. (2023).

In fact, the extra depth often relates to measures that could hinder rather than boost trade and welfare. In particular, the tariff complementarity of shallow integration does not need to extend to those other measures. Moreover, these RTAs often include rules that transcend WTO rules, as is the case for some product standards and other technical barriers to trade. This may lead to concerns that the expanding network of deep RTAs could render the WTO's multilateral framework unworkable – if not irrelevant. This is troubling, because it could undermine a system that has proven very effective in bringing down trade barriers and in providing stability to world trade.

An unproven hypothesis, consistent with current trends, is that the multilateral trading system could coexist with the spread of RTAs, provided that the latter focus on the core issue of reciprocal trade liberalization – that is, the bilateral reduction of trade barriers. However, deep RTAs with provisions that conflict with existing multilateral rules may render progress in multilateral negotiations unattainable.

If this hypothesis holds, it would be necessary to call for restraint in the scope of future RTAs, to ensure that they do not impede broader multilateral liberalization. “Deep” issues, important as they are, might be better addressed within the WTO.

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effects. International cooperation on competition policies ensures a level playing field, prevents anti-competitive practices and fosters fair competition. For instance, research shows that competition positively impacts digital connectivity in sub-Saharan Africa (Buys et al., 2009). Effective competition policy within economies prevents monopolistic behaviour, promotes market efficiency, lowers prices, increases innovation and enhances consumer choice. It also creates opportunities for MSMEs and marginalized groups, promoting inclusiveness.

A few emerging economies have revised their competition laws to intensify the scrutiny of digital platforms, while others are still in the process of adopting digital competition laws.

Given the global nature of digital firms, competition authorities are encouraged to enhance international cooperation and information-sharing, and to expand international best-practice guidelines on digital issues (Akcigit et al., 2021). Furthermore, there has been some debate about whether competition laws need to be revised to reflect a deviation from the consumer welfare criterion (Khan, 2017).

Several international organizations and regional initiatives promote cooperation on competition policy.

For instance, the OECD has conducted extensive research on competition within the digital economy through its Competition Committee and the Global Forum on Competition. The OECD handbook on competition policy in the digital age²² serves as a blueprint for reform and cooperation. Detailed chapters or provisions on competition policy have been incorporated in numerous bilateral and RTAs (Anderson et al., 2018).

While the WTO does not have dedicated rules for competition issues in international trade, certain provisions in the WTO agreements address these concerns.

Generally, open trade allows more players to compete in the market. Relevant GATS market-opening commitments provide guaranteed levels of market contestability and non-discriminatory treatment of domestic and foreign services suppliers, fostering more competition in services markets. Certain competition policies on telecommunications are included in the Basic Telecoms Reference Paper and are thus addressed by the GATS and services trade negotiations. Relevant competition-related provisions can also be found in the TRIPS and the revised Agreement on Government Procurement (GPA) 2012. At the 1996 Singapore Ministerial Conference, members discussed the interaction between trade and competition policy, specifically anti-

competitive practices. Even without new specific rules on competition, the WTO could further collaborate with national and international competition agencies in areas where trade and competition intersect.

(iv) International cooperations on taxation in the digital age

International coordination in taxation policies is essential to prevent tax evasion and ensure that trade contributes to inclusive development.

Taxation serves as a vital source of revenue for governments to finance essential public services and infrastructure, yet a lack of taxation coordination in a globalized world could result in a “race to the bottom”.

International capital tax bases have become increasingly mobile in recent decades, in part driven by the rise in digital transactions.

Coupled with open trade, this allows firms to relocate their operations. As governments compete to attract investors by offering favourable tax environments, they may succumb to pressure to lower tax rates and provide generous incentives, potentially compromising crucial revenue streams essential for public services and infrastructure. Tax rates on capital have decreased substantially over time as governments have attempted to maintain an attractive tax environment (Egger, Nigai and Strecker, 2019; Devereux, Griffith and Klemm, 2002). In response to the increasing presence of digital firms, governments are attempting to come up with different ways to tax the revenues of larger companies in their jurisdictions, with the aim both of raising revenues and of protecting and promoting their domestic digital sector.

There is a clear need to coordinate tax policies internationally.

The current international tax regime consists of a large network of bilateral tax treaties, generally based on the OECD or the United Nations Model Tax Conventions. However, despite efforts toward harmonization, challenges persist in international tax systems. These include a lack of transparency and of information exchange between authorities, inconsistent transfer pricing rules and widespread tax avoidance practices, all of which compromise tax collection across borders. In this regard, efforts to exchange information can greatly reduce the incentive for tax evasion. For instance, recent research finds that, since economies started to exchange bank information automatically with foreign tax authorities in the second half of the 2010s, tax evaders have repatriated previously undeclared offshore wealth, which has helped to close about 70 per cent of the offshore tax gap in Denmark (Boas et al., 2024).

Several international organizations aim to address international cooperation in taxation. In 2023, nearly 140 members of the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting agreed on an outcome statement for the two-pillar solution addressing tax challenges from the digital economy. Pillar One²³ establishes new taxing rights over large multinational enterprises with a digital presence, while Pillar Two sets the base rate and approach for a new global minimum corporate tax. Although widely seen as progress to reduce a “race to the bottom” in global tax competition, the solution’s contribution to inclusive trade needs further assessment.

Some developing economies have also advocated for a framework convention on international tax cooperation under the UN. Many developing economies question the equity of the OECD process, citing concerns about high-income economies having the first choice for additional top-up tax on multinational enterprises and the general low rate of minimum taxes, while low-income economies have to forgo existing and future digital service taxes in exchange for a new formula-based approach to profit reallocation that could undermine their revenue base (McCarthy, 2022). Recently, the UN adopted a resolution stressing universal international tax cooperation,²⁴ acknowledging the varied needs and capacities of all countries, particularly developing ones.

(c) International cooperation to tackle climate change and facilitate the green transition

International cooperation is indispensable in addressing climate change and other environmental challenges on a global scale. It entails addressing global environmental challenges, developing sustainable infrastructure and creating financial mechanisms to support countries affected by climate change. At the same time, trade can contribute to the fight against climate change, as it allows access to affordable renewable energy and equipment. Furthermore, harmonizing or enhancing the interoperability of environmental standards and policies across borders ensures consistent and effective solutions to the climate challenge.

(i) Building climate-resilient, low-carbon infrastructure is essential

Climate-resilient infrastructure, renewable energy projects and sustainable transportation are crucial for climate mitigation and adaptation. According to the International Energy Agency, global investment in energy infrastructure needs to reach US\$ 4.5 trillion per year by 2030 to keep global

temperatures from rising by more than 1.5°C (IEA, 2023). However, many developing economies are finding it a struggle to finance energy infrastructure, in part due to debts resulting from the COVID-19 pandemic. Thus, international cooperation in infrastructure is vital for ambitious climate action. Projects like the Noor Concentrated Solar Power Complex in Morocco, funded by Climate Investment Funds, supplies clean energy to 2 million people. International development assistance such as Aid for Trade increasingly includes environmental considerations (WTO, 2022).

International trade is crucial to reduce greenhouse gas emissions and transition to low-carbon economies. International trade increases the worldwide diffusion and deployment of lower-emission goods, services and capital equipment (i.e., the equipment necessary to manufacture goods and provide services), as well as of knowledge. It also reduces the costs of these products and services through efficiency improvements, economies of scale and learning-by-doing. For instance, the cost of solar electricity has plummeted by 97 per cent since 1990, and a significant part of the cost decline of solar panel systems has been attributed to GVCs, which have enabled producers to lower production costs and reap economies of scale by locating different production stages in different countries (WTO and IRENA, 2021). Market opportunities for low-carbon exports can also spur more investment and innovation in new low-carbon technologies and encourage efforts to better adapt these technologies to local conditions.

Furthermore, climate adaptation is a key component of the global response to climate change. The UNFCCC Nairobi work programme helps economies to understand the impacts of, vulnerability to and adaptation to climate change, in order to guide informed decisions. International organizations and regional development banks, like the United Nations Office for Disaster Risk Reduction (UNDRR), support resilience to natural disasters. The ITU information and communication technology for disaster management initiative focuses on helping economies respond to disaster risks and enhance resilience.

(ii) Ensuring coherence between trade and environmental policies is crucial for sustainability

International cooperation ensures coherence between environmental and trade policies. Without coordinated climate policies, isolated actions can lead to consequences such as carbon leakage and competitiveness loss. This underlines the critical need for coordination between climate and trade policies.

Efforts within the WTO and other international organizations aim to foster collaboration, establish international standards, and encourage convergence in national approaches to climate change. Such cooperation is pivotal for achieving the UN Sustainable Development Goals while addressing the interconnected challenges of climate change and international trade. As mentioned in Section D.1, the WTO has launched a task force with the IMF, OECD, UNCTAD, UNFCCC and World Bank to develop a common methodology to determine global carbon prices, and to ensure that plans to tax imports based on their carbon emissions do not unfairly penalize developing economies.

(iii) Climate actions can be enhanced through finance and trade

Climate finance is crucial for addressing climate change, especially for vulnerable developing economies. Climate finance commitments, such as the US\$ 100 billion per year pledged by developed economies at the Fifteenth meeting of the Conference of the Parties to UNFCCC in 2022, are crucial for supporting climate action in developing economies. Policies such as carbon pricing further shape development prospects, and global cooperation towards net zero emissions by 2050, supported by mechanisms like a global emission trading scheme, could significantly enhance real income for the LDCs compared to scenarios without climate action.

Several international initiatives aim to channel climate finance to developing economies, but more efforts are needed to scale up funding. The Green Climate Fund,²⁵ established under the UNFCCC, provides finance through grants, loans and equity investments, while the Loss and Damage Fund, set up in 2023, supports developing economies in coping with climate impacts. The estimated adaptation costs for these economies are US\$ 215 billion per year up to 2030 (UNEP, 2023). Enhancing transparency and accountability, and exploring innovative financing mechanisms like green bonds and carbon pricing, are crucial to mobilize additional resources. Global collaboration is essential to ensure that there is adequate funding for climate adaptation and resilience.

Trade plays a pivotal role in enhancing climate action by effectively reducing costs and amplifying impact. It enables economies, particularly the most vulnerable ones, to better prepare for and respond to climate shocks through access to essential technologies and critical goods and services, such as food and healthcare products. Open international markets facilitate the economic adjustments and

resource reallocations necessary for long-term resilience, providing diversified sources of supply that bolster protection against localized weather events.

(iv) Cooperation on anti-corruption is important to foster trust institution

International cooperation to combat corruption plays a crucial role in ensuring that the benefits of trade, including revenues from exports of natural resources, are more widely shared. As discussed in Chapter B, the green transition offers new export opportunities for developing economies. However, robust institutions and complementary policies are necessary to foster wide economic development in resource-abundant economies. Anti-corruption efforts can also ensure that international trade agreements work more effectively. Research finds that information frictions and corruption perceptions can affect firm's participation in public procurement (Colonnelli et al., 2024). In that context, the GPA would be more effective in supporting inclusive trade if accompanied by anti-corruption policies.

Efforts to combat corruption internationally encompass various strategies, including information sharing and intelligence cooperation, as well as developing legal frameworks. Organizations such as the OECD play a crucial role in establishing standards and best practices related to bribery, procurement, public financial management, integrity in both public and private sectors, illicit trade, development assistance, and tax issues. International agreements like the United Nations Convention against Corruption (UNCAC) offer a shared foundation for countries to adopt anti-corruption measures and establish a framework for mutual legal assistance. Additionally, collaboration is vital for the recovery of assets acquired through corrupt practices. Cooperation on anti-corruption is also promoted in a number of recent RTAs.

(d) International cooperation on trade and within-economy inclusiveness

There is an ongoing debate on the introduction of labour and other inclusiveness considerations in trade policies and the need for international cooperation. Some, mostly developed, economies consider that the lack of basic labour standards puts workers at risk and creates unfair competition. They argue that imposing restrictions on imports from economies that do not uphold these standards, or favouring imports that meet them, would encourage better working conditions and promote fair competition. Conversely, many developing economies consider that

restricting imports that do not respect certain labour standards is a covert form of protectionism, potentially increasing production costs and making their exports less competitive. In this context of diverging views, trade measures taken unilaterally by importing economies to raise labour standards in exporting economies have the potential to create trade tensions.

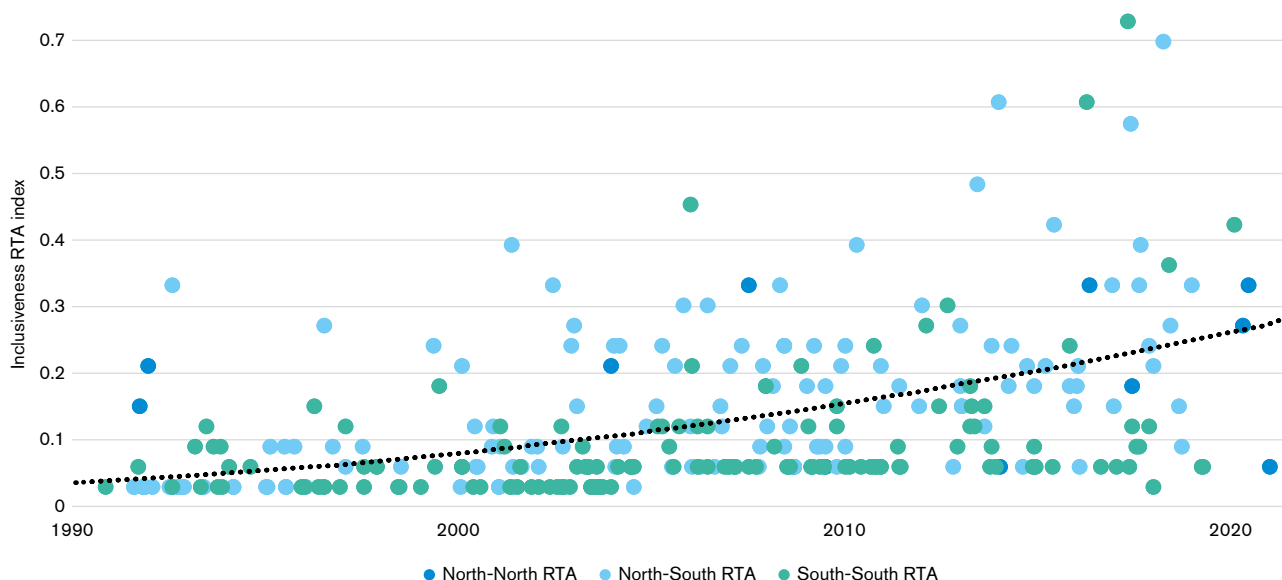
International cooperation on trade and labour recognizes that violations of workers' rights should not be used as a trade advantage, and labour standards should not be misused for protectionist purposes. The 1996 Singapore Ministerial Declaration recognizes the International Labour Organization (ILO) as the competent body to establish and address labour standards. The Declaration cautions against misusing labour standards for protectionist trade purposes, and emphasizes the importance of preserving economies' comparative advantage, especially that of developing economies in which wages are low. It further acknowledges that economic growth and development, facilitated by expanded trade, play a role in promoting fair labour standards. While the Declaration assigns the regulation of trade and labour to the respective international organizations, it does not imply that trade policies should overlook labour standard violations. The 2008 ILO Declaration on Social Justice for a Fair Globalization recognises the effects of trade policies

on employment and emphasizes that the violation of fundamental labour principles and rights cannot be used as a legitimate comparative advantage.

Provisions addressing various dimensions of inclusiveness within the economy are included in an increasing number of RTAs. RTAs are sometimes viewed as a "laboratory" in which new types of provisions are designed to address new issues and challenges. More than 310 RTAs include provisions that explicitly relate to some of the dimensions of inclusiveness, including human rights, workers' rights, gender equality, indigenous peoples' rights and MSMEs' participation (see Figure D.11). Provisions in RTAs are known to be heterogenous, and inclusiveness-related provisions are no exception. While many provisions on inclusiveness promote cooperation activities, other provisions establish specific level-playing-field disciplines or exemptions.

Labour provisions can be found in an increasing number of unilateral, preferential, bilateral and regional trade agreements, as well as in international investment agreements. About one third of the total number of RTAs in force and notified to the WTO in 2022 included labour provisions (Corley-Coulibaly, Ebertand and Pelin Sekerler, 2023). While developed economies continue to be the main proponent of labour provisions in RTAs, an increasing number of RTAs negotiated between developing

Figure D.11: Increasing numbers of provisions on inclusiveness in RTAs, 1990-2021



Source: Authors' calculations, based on a mapping of provisions on inclusiveness in RTAs.

Note: This figure shows the evolution of provisions on inclusiveness in RTAs between 1990 and 2021. The inclusiveness RTA index ranges from 0 to 1 and considers 33 explicit types of provisions addressing different dimensions of inclusiveness, including human rights, workers, MSMEs, poverty, gender, indigenous communities, people with disabilities, and other minorities and vulnerable groups. "North" is defined as high-income economies, whereas "South" is defined as low- and middle-income economies, according to the 2022 World Bank's income group classification.

economies include explicit labour provisions. Labour provisions typically include commitments to uphold international labour standards, such as those set by the ILO, which cover issues like child labour, forced labour and the right to collective bargaining. Another common type of labour provision establishes mechanisms for cooperation and dialogue between the parties to improve labour conditions, often through technical assistance and capacity-building initiatives. Some RTAs also incorporate dispute resolution mechanisms to address non-compliance with labour provisions, allowing for consultations, and in some cases, sanctions, if labour standards are violated (Corley-Coulibaly, Postolachi and Tesfay, 2021).²⁶

Some relatively recent detailed provisions on inclusiveness in RTAs specifically target disadvantaged groups. These include some women, vulnerable workers, indigenous peoples and persons with disabilities. Many of these provisions identify gender and gender-related issues as key areas for cooperation.²⁷ Other, more specific, provisions set out commitments concerning domestic policies, including adopting and effectively enforcing gender-

related policies and protecting indigenous traditional knowledge, cultural expressions and genetic resources from misappropriation. These provisions often complement labour provisions on the elimination of employment discrimination based on race, religion, age, sex or other grounds, including disability, sexual orientation and gender identity. Some provisions further clarify that domestic programmes designed to assist vulnerable groups, including women and indigenous communities, do not fall under the obligations that fall under the RTA's chapters on government procurement or services (Monteiro, 2021c).

Some provisions on inclusiveness in RTAs promote social corporate responsibility and specifically target certain types of firms, including MSMEs and artisans. Recent provisions call on parties to these RTAs to encourage enterprises within their territories to incorporate best practices of corporate social responsibility voluntarily in their internal policies (Monteiro, 2021a). An increasing but limited number of RTAs also includes provisions to promote and cooperate on fair and ethical trade schemes (see Box D.4). In recognition of the

Box D.4: Due diligence and responsible sourcing in supply chains

Due diligence requirements and responsible sourcing practices are integral components of fair trade and ethical trade schemes. These schemes are designed to ensure that trade practices are fair, transparent and sustainable. Due diligence involves assessing and mitigating risks related to human rights, environmental harm and corruption in supply chains, while responsible sourcing entails selecting suppliers that adhere to ethical and sustainable practices, such as by not using forced labour or child labour.

Due diligence and responsible sourcing are driven both by private sector initiatives and government regulations. Companies adopt these practices as part of their corporate social responsibility strategies, responding to industry standards, certifications, and consumer and investor pressures. Some governments provide the legal framework and enforcement mechanisms to ensure compliance and accountability. Several international bodies also provide guidelines to help companies implement due diligence and responsible sourcing practices, such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Empirical evidence on the effectiveness of due diligence and responsible sourcing initiatives is limited. Some studies point to the risk that focusing solely on improving working conditions within specific GVCs may inadvertently widen working condition gaps between workers involved in GVCs and those who are not, as GVCs generally have better working conditions compared to firms not engaged in international trade (see the opinion piece by Alonso Alfaro Ureña, Benjamin Faber, Cecile Gaubert, Isabela Manelici and José Pablo Vásquez).

Despite potential unintended effects, due diligence and responsible sourcing initiatives can contribute to improving working conditions and inclusivity within GVCs. However, continuous cooperation between trading partners and a careful consideration of their potential harmful effects must be taken into consideration. The growing need for GVC coordination among governments may create a favorable environment for greater collaborative actions to tackle trade effects, ensure consistency in decision-making over time, and seize opportunities to promote inclusivity within GVCs.

The promise and pitfalls of responsible sourcing in global value chains

By Alonso Alfaro Ureña, Chief Economist, Central Bank of Costa Rica and Professor, Department of Economics, Universidad de Costa Rica; Benjamin Faber, Associate Professor, University of California, Berkeley; Cecile Gaubert, Associate Professor, University of California, Berkeley; Isabela Manelici, Assistant Professor, London School of Economics; José Pablo Vásquez, Assistant Professor, London School of Economics.

Multinational enterprises (MNEs) are facing increasing demands by policymakers and the public to improve working conditions in their supply chains. In response, it has become common practice for MNEs to impose minimum labour and safety standards on their suppliers, typically called “responsible sourcing” (RS) policies. The reasons why MNEs choose to adopt these standards probably vary. Their leadership may have altruistic objectives, unrelated to profits or shareholder value. RS policies may also be more calculated: MNEs may be attempting to avoid the reputational cost of workplace accidents, or to increase demand by improving their image and branding.

A natural concern regarding these mostly voluntary RS policies is that they may just be “hot air”, and may not in reality bring about meaningful changes for workers in sourcing countries. However, mounting empirical evidence suggests that RS policies do indeed affect MNE suppliers and their workers.

One recent study by Boudreau (2024) found that MNE enforcement programmes of occupational safety and health (OSH) committees after 2013 significantly increased supplier compliance with regulations in Bangladesh. Another study by Alfaro Ureña et al. (2022) found that, when MNEs in Costa Rica imposed RS standards on their suppliers worldwide, these RS rollouts led to increased wages and workplace amenities for low-wage workers at suppliers of the MNEs. At the same time, the study found significant decreases in sales and employment in domestic firms not supplying to MNEs applying RS policies.

These findings underscore an important trade-off involved in RS policies. On the one hand, RS may bring

meaningful benefits to workers at suppliers targeted by RS policies. On the other hand, RS imposes additional costs on MNE suppliers. If these costs are not sufficiently borne by the MNEs and their foreign customers, RS can give rise to adverse knock-on effects on local firms and workers due both to lower chances of finding jobs at RS suppliers and to increased local prices, as MNE suppliers may also produce for domestic consumption.

Alfaro Ureña et al. (2022) provide a theoretical framework to dissect these forces and study the drivers of this trade-off. The benefits of RS for workers in sourcing countries are larger when MNEs experience increased demand due to RS rollouts from their customers. However, the benefits to workers are reduced, and could even be negative, when MNE suppliers have little bargaining power and thus bear the cost of the policy, and when much of the affected production is sold locally, leading to increased local prices.

While the current state of research suggests cautious optimism about the ability of MNEs’ RS policies to improve working conditions among their suppliers, the overall impacts of RS policies on the host economy’s workers are, in general, ambiguous and will depend on the empirical context. There is therefore large scope for further empirical and theoretical work on these topics to help deliver the stated objectives of RS and limit the unintended side effects.

Disclaimer

Opinion pieces are the sole responsibility of their authors. They do not necessarily reflect the opinions or views of WTO members or the WTO Secretariat.

Box D.5: Policy space to adopt labour-related trade measures in the WTO

Part of the debate on trade and labour in the trade policy community revolves around whether WTO rules could potentially allow members to adopt labour-related trade measures, such as prohibiting imports of, or imposing higher import tariffs on, products made under poor working conditions.

WTO members could seek to justify such measures under some of the general exceptions set out in Article XX of the GATT 1994 or Article XIV of the GATS, such as those relating to “public morals”, “protection of human [i.e., workers’] life or health”, “securing compliance with laws or regulations [i.e., labour laws]”, or “products of prison labour”. If a labour-related measure were found to fall within the scope of any potentially exception, the member may need to demonstrate, among other things, that the contribution of the measure to the achievement of the objective outweighs its trade restrictiveness, with consideration given to, among other things, the existence of reasonably available alternative measures (for exceptions containing a necessity test). The importing member would also need to demonstrate that the challenged measure is not applied in an arbitrary or discriminatory manner.

Other WTO agreements also contain provisions that could accommodate policy space for WTO members to adopt or enforce measures addressing unfair labour standards. For example, the TBT Agreement allows WTO members to maintain any regulatory distinction based on legitimate objectives if applied even-handedly.” It remains to be determined whether such “regulatory distinction” could be based on production methods relating to labour standards, i.e. whether the goods produced were made in respect of fundamental or core labour standards or not.

Members’ engagement may be necessary to have further clarity on the applicability of the existing rules and/or the need to update existing WTO rules to cover labour-related issues, including but not limited to the enforcement of internationally agreed labour standards. For the time being, there is no consensus among WTO members.

specific needs of and challenges faced by MSMEs, an increasing number of RTAs also include explicit provisions which, for example, promote cooperation on MSMEs among the parties, exempt MSMEs or programmes supporting MSMEs from specific trade obligations set out in the RTA, or aim to improve access to trade-related information, including through websites (Monteiro, 2016).²⁸

Empirical evidence on the effectiveness of provisions on inclusiveness and labour in RTAs is scarce. RTA provisions on inclusiveness usually take the form of best-endeavour clauses, and many focus on enhancing cooperation and capacity-building. As some of these provisions on inclusiveness are relatively new, there is limited evidence on their effectiveness. However, certain RTAs have established institutional arrangements to monitor the implementation of specific inclusiveness provisions, such as those related to labour and gender. These monitoring exercises may provide new information and analysis. Further research and more disaggregated data are needed to assess comprehensively the effectiveness of these provisions on promoting inclusiveness.

Labour provisions in RTAs are more likely to improve working conditions or to have positive

effects on trade when combined with appropriate accompanying measures. The empirical evidence regarding labour provisions in RTAs points to mixed results, with some studies indicating a positive impact on labour outcomes (ILO, 2016), while others suggest a negative impact of specific labour provisions, such as those on child labour (Abman et al., 2023). For instance, compared to simple bans of child labour, active education and income support policies, such as subsidizing households for school attendance, are found to be more effective in addressing child labour without jeopardizing inclusiveness and widening inequalities (Fernandes, Rocha and Ruta, 2023). Recent evidence shows that labour provisions can impact trade differently depending on the parties’ capacity to comply with the requirements. Provisions on sustainable development (covering both labour and the environment) have been found to increase developed economies’ labour-intensive exports but reduce developing economies’ labour-intensive exports (Hoekman, Santi, and Shingal, 2023). However, labour provisions, when accompanied by strong cooperation, have resulted in an increase in exports from low-income economies (Carrère, Olarreaga and Raess, 2022). Non-binding provisions on labour standards, environmental protection and civil and political rights

have also shown to be more effective in improving performance in certain areas when accompanied by financial support (Francois et al., 2022).

Explicit references to the social dimension of sustainable development in recent ministerial declarations and documents could lead to more focused discussions on labour-related trade measures at the WTO. The Outcome Document from the 12th Ministerial Conference and the Ministerial Declaration from the 13th Ministerial Conference refer explicitly to the importance of all three pillars of trade and sustainable development – economic, environmental and also social. Drawing on experiences with labour provisions in RTAs, some members may wish to explore the possibility of having a discussion about labour-related trade measures in the WTO. For instance, in 2023 the Committee on Government Procurement held an information-sharing workshop on the implementation of labour standards in the government procurement systems of parties to the GPA. Under consideration was how to conduct government procurement processes in a manner that protects and advances labour standards, while respecting international trade commitments. The question of the policy space available in the WTO agreements for members to adopt labour related trade measures is still open (see Box D.5).

Greater collaboration between international organizations is needed to make trade more inclusive. Under the “Decision on achieving greater coherence in global economic policy-making”, the WTO already collaborates with the IMF and the World Bank. The WTO also works with many other international organizations. The WTO can enhance cooperation with international organizations to promote infrastructure, improve policy coherence, maximize international spillovers and limit the negative impacts of specific policies. These collaborative efforts could involve partnerships, information exchanges and leveraging the WTO as a platform for international organizations, governments, businesses and non-governmental organizations to collaborate and share information on trade-related issues relevant for inclusiveness across and within economies.

4. Conclusions

The WTO promotes convergence through a combination of commitments and flexibilities. It supports a rules-based trading system which enhances economic performance and benefits the less powerful by promoting non-discrimination and by pursuing a wider membership. To promote development, WTO

rules also provide flexibilities to developing members, including LDCs, through S&DT provisions.

Despite progress, the participation of some developing members in the different WTO functions remains limited. While there is evidence that preferences can help low-income economies increase their exports, little is known about their ability to use other types of S&DT provisions effectively. While participation in the different WTO functions is crucial for reaping benefits from them, many developing members continue to face constraints that hinder their ability to engage actively.

More can be done for economies that have not yet derived all the benefits from trade. The WTO’s mandate to facilitate open and predictable trade remains pivotal in promoting development amidst evolving geopolitical tensions and digital revolution. It is important to maintain and deepen the system. Improving the accession process, furthering commitments in trade in services and digital trade, and more coordination in the area of trade-related environmental policies, will be essential to trigger a new and more inclusive wave of trade-led growth.

S&DT provisions also need to be made more effective. More support and capacity-building could help low-income economies to make better use of S&DT provisions aimed at facilitating the implementation of WTO agreements. Finding the right balance between binding commitments and effective flexibilities is essential to provide relevant policy space without undermining the predictability and stability of trade policies achieved through credible commitments. While there is no “one-size-fits-all” approach to flexibilities, commitments should be aligned with a member’s capacity to implement them, while recognizing that certain carve-outs can undermine some of the benefits of a rule-based system. The S&DT provisions of the TFA, which allow developing and LDC members to set their own implementation timetables based on their capacity, could serve as a blueprint. In addition, evidence on the effectiveness of trade policies to promote development, the rationales for S&DT treatment, and information on cross-border spillovers could also help to design S&DT flexibilities, while minimizing potential adverse effects on other economies.

Questions related to the distributional effects within economies and to the inclusiveness of WTO agreements have increasingly been raised in the WTO. Trade and trade policies have significant distributional effects and the WTO – given that it promotes trade – contributes to these effects.

There is, however, little direct empirical evidence on the distributional effects of the WTO. While each government has the autonomy to determine how to manage the redistributive impact of trade policies, the WTO agreements do not limit governments that wish to use non-discriminatory domestic complementary policies, such as labour market adjustment policies, to address it. The flexible nature of the WTO agreements also allows for the use of specific discriminatory trade instruments to address the redistributive effects of trade policies, including safeguards in response to import surges.

A more inclusive economy requires policies that reduce the barriers and obstacles that currently prevent marginalized individuals, firms and regions from participating fully in and benefitting from global markets. While few WTO agreements explicitly address aspects of inclusiveness, many other WTO provisions are relevant for inclusive trade. Discussions on inclusiveness and specific inclusive capacity-building initiatives are gaining traction in the WTO.

Information-sharing, research and tailored technical assistance could contribute to a more inclusive implementation of WTO agreements. While WTO members hold different views on how to address social inclusiveness in trade agreements, more information on the effects of certain trade policy measures on disadvantaged women, MSMEs or low-income households could help to address potentially

discriminatory effects. WTO discussions on making trade policy more inclusive could also benefit from the increased participation of vulnerable groups in information-sharing sessions, as well as more active participation of these groups in domestic processes, including in the implementation stage. More technical assistance, including Aid for Trade, could be targeted at reducing poverty and increasing inclusion. In a context of increasing geopolitical tensions and climate change, the WTO could also increase its efforts to support food security.

Trade and complementary policies for inclusiveness across and within economies can be made more effective by broadening and strengthening international cooperation. While the WTO remains a cornerstone for international trade cooperation, many trade-related developmental and inclusive policies are also addressed through other complementary channels of international collaboration. Different international organizations deal with some of the complementary policies that are essential for enabling trade to support development and inclusiveness. For example, to achieve inclusive digital trade, it is necessary to establish cross-cutting cooperation, to address investment in digital connectivity infrastructure and to develop a cohesive digital regulatory framework and competition policy. Improving coherence and coordination among international organizations could amplify the positive effects of each individual organization's work on development and inclusiveness.

Endnotes

- 1 While the effects of terms of trade on economic growth remain theoretically ambiguous, a significant strand of the empirical studies report a positive effect of terms of trade on output and economic growth (Schmitt-Grohé and Uribe, 2018).
- 2 Overseas territories of GATT contracting parties that became independent usually became contracting parties themselves through sponsorship under Article XXVI:5(c) of the GATT, without making any new concessions. In contrast, Article XXXIII of the GATT required new contracting parties to negotiate terms of accession, often involving tariff concessions, known as the “GATT ticket”.
- 3 The focus here is on the patent system and its impact on development. Note that the implementation of provisions on copyright (individual artists), designs (provision on textile designs), geographical indications (local branding for traditional products) or trademarks (affordable protection for MSMEs) may affect inclusiveness, but this is not covered in this report.
- 4 Another type of flexibility that can be used to justify development policy measures is GATT Article XX(a) (“General Exceptions”) and the General Agreement on Trade in Services (GATS) Article XIV(a) (“General Exceptions”), which allow WTO members to protect public morals and public order. For example, in Brazil – Taxation (dispute settlement numbers DS472 and DS497), Brazil argued that the objective of its discriminatory PATVD (“Program of Support to the Technological Developments of the Industry of Digital TV Equipment”) tax measures was to bridge the “digital divide” and to achieve “social inclusion” – two development-related policies. The panel concluded that such measures were “not incapable of contributing to the objective of bridging the digital divide and promoting social inclusion” and were thus considered to be designed as measures to protect “public moral” objectives under GATT Article XX(a) (DS472/R; DS497/R, paragraph 7.583). However, while the panel accepted that such an objective could fall within the scope of Article XX(a), it ultimately found that the challenged measure did not contribute to the policy objective of bridging the digital divide and promoting social inclusion and that there were better and more efficient alternatives. Parties did not appeal this conclusion of the panel report.
- 5 See WTO official document number WT/COMTD/LDC/W/71 (available at <https://docs.wto.org/>).
- 6 These coalition groups include the African Group, LDCs and SVEs. See for instance https://www.wto.org/english/tratop_e/dda_e/negotiating_groups_e.htm
- 7 See WTO (2024c) for a discussion on outstanding notifications.
- 8 See WTO official document number JOB/GC/359/Rev.3 (available at <https://docs.wto.org/>).
- 9 As discussed in Section D.4, coordination of competition policy can be important for economic convergence by addressing concerns that monopoly profits in digital markets are concentrated in a small set of high-income economies and by avoiding an erosion of tax bases in low-income economies as a result of profit-shifting.
- 10 The G-90, also known as the Group of 90, is an alliance of the poorest and smallest developing economies. The G-90 has proposed allowing developing economies longer comment periods on proposed technical regulations or standards, and longer compliance periods. The proposal also suggests that developed economies might provide support to developing economies adversely affected by the new standards, to ensure no or minimal disruptions to their exports. The G-90 proposal also foresees compensatory adjustment support by developed economies in case of urgent implementation of standards to maintain the market shares of developing economies, as well as support for their technological and infrastructural capabilities.
- 11 Information on all technical assistance programmes relative to IP is reported each year to the TRIPS Council and are made available on the WTO website (https://www.wto.org/english/tratop_e/trips_e/intel9_e.htm).
- 12 Available at https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm.
- 13 Recently, there has been a broader debate on industrial policy taking place in the General Council and some other bodies, including the CTD. The African Group is among the main proponents having tabled several proposals.
- 14 Measures satisfying those requirements would be justified either under GATT Article XX(a) (public morals) or, for measures affecting trade in services, under GATS Article XIV(a) (public order).
- 15 Authorized operators are operators which, as they meet specified criteria, are granted provision of additional trade facilitation measures related to import, export, or transit formalities and procedures.
- 16 See https://www.wto.org/english/thewto_e/minist_e/mc12_e/mc12_e.htm.
- 17 See WTO Ministerial Declaration on the Emergency Response to Food Insecurity (WT/MIN(22)/28) and Ministerial Decision on World Food Programme (WFP) Food Purchases Exemptions from Export Prohibitions or Restrictions (WT/MIN(22)/29) (available at <https://docs.wto.org/>).
- 18 See <https://www.adb.org/what-we-do/trade-supply-chain-finance-program/trade-finance>.
- 19 See WTO official document number INF/MSME/W/47/rev.1 (available at <https://docs.wto.org/>). According to the World Customs Organization (WCO), an AEO is “a party involved in the international movement of goods in whatever function that has been approved by or on behalf of a national customs administration as complying with WCO or equivalent standards for supply chain security”.
- 20 See <https://a4ai.org/research/affordability-drivers-index/>.
- 21 See <https://www.undp.org/digital/digital-public-infrastructure>.
- 22 See <https://www.oecd.org/daf/competition-policy-in-the-digital-age/>.
- 23 See https://www.oecd-ilibrary.org/taxation/pillar-one-amount-b_21ea168b-en.
- 24 See <https://press.un.org/en/2023/gaef3597.doc.htm>.
- 25 See <https://www.greenclimate.fund/>.
- 26 The Generalized System of Preferences (GSP) scheme established by the European Union provides deeper market access conditioned upon ratification of and compliance with several international conventions in human rights, labour rights, the environment and good governance. These preferences are withdrawn in case of violations of these international conventions. Under the African Growth and Opportunity Act (AGOA), adopted by the United States, developing economies can benefit from preferential market access to the United States, provided that they do not engage in gross violations of internationally recognized human rights and that they collaborate in international efforts to eliminate human rights violations.
- 27 The WTO database on gender provisions in RTAs is accessible at: https://www.wto.org/english/tratop_e/womenandtrade_e/gender_responsive_trade_agreement_db_e.htm.
- 28 The WTO database on MSME-related language in RTAs is accessible at https://www.wto.org/english/tratop_e/msmesandtra_e/rtaprovisions_e.htm.



Conclusions

Over the past 30 years, the world has witnessed a period of unprecedented income convergence, accompanied by a steep reduction in poverty, but inequality remains high. Between 1995 and 2023, global per capita income, adjusted for inflation, increased by approximately 65 per cent, while the per capita income of low- and middle-income economies increased by more than to 191 per cent. This notable economic growth helped reduce extreme poverty in low- and middle-income economies, which declined from 40.3 per cent in 1995 to 10.6 per cent in 2022. Nevertheless, a staggering 712 million people worldwide still live in extreme poverty, and inequality levels remain consistently high.

Given these figures, it is understandable that there is some disagreement about the effects of globalization on inclusiveness between and within economies. The debate has formed the basis for this year's *World Trade Report*. Unfortunately, two misleading assumptions still underlie much of this debate: that trade is detrimental to development and inclusiveness, and that WTO rules prevent governments from adopting ambitious development and inclusiveness policies.

The first misleading assumption is that, as trade only favours wealthy individuals and economies, it exacerbates inequality and proves detrimental to development and inclusiveness. This has led to calls to protect some domestic industries and jobs by limiting imports of certain goods and services. In fact, the reality is that trade has played a crucial role in reducing poverty and in enabling many low- and middle-income economies to catch up to high-income economies. Trade between low- and/or middle-income economies increased from 5 per cent in 1995 to

19 per cent of global merchandise trade in 2021. Trade cost reductions between 1995 and 2020 are estimated to have led to a 5.7 per cent increase in global real GDP over the period, with low-income economies growing by around 23 per cent. Trade has also supported the creation of millions of jobs, including better paid jobs.

However, it is true that, while many have benefited from international trade, some individuals, regions and economies have not benefited as much as others. A number of low- and middle-income economies have faced challenges either to participating in international trade or to leveraging trade to diversify their economies. As outlined in Chapter B, high trade costs, whether resulting from restrictive trade policies at home and abroad, inadequate infrastructure, geographical remoteness or institutional challenges, have rendered it difficult for some economies to participate to trade. Obstacles to structural transformation, such as inefficient labour and capital markets, restrictions to foreign direct investment, or limited capacity to absorb foreign technologies, have made it difficult for other economies to diversify and expand the sectors in which they have comparative advantages. Failure to spread the gains obtained through trade more widely within the economy prevents individuals and firms within that economy from leveraging trade, in turn.

Within any economy, the gains from trade may be unevenly shared out depending on different factors, including people's employment and consumption patterns. As discussed in Chapter C, some individuals may struggle to adapt to import competition because they lack the skills needed to participate in export-oriented industries, or they may

face mobility barriers that prevent them from relocating to more prosperous regions to benefit from new job opportunities. Some regions have struggled to adapt to new economic conditions following trade-opening. Some individuals may not benefit from price reductions associated with trade openness because of high transport costs and uncompetitive distribution sectors. Nevertheless, the impact of trade on development and inclusiveness has been sufficiently diverse across economies to suggest that obstacles are due more to a lack of sound trade policies and adequate domestic complementary policies accompanying the process of globalization than to the process itself.

In fact, it is not through less trade that more economic convergence and inclusiveness can be achieved. As the world grapples with increasing geopolitical tensions, the digital revolution and a greater push for sustainability, achieving more sustained inclusiveness and poverty reduction may require, among other things, a sizeable middle class. A robust middle class supports the overall development process by driving domestic consumption, fostering entrepreneurial activities, and contributing to social stability. Many developing economies are unlikely to be large enough to have a sufficiently large middle class to experience sustained economic growth without access to large, lucrative export markets, and indeed, for economies that face high trade costs, limited trade participation is precisely the problem. Meanwhile, for economies that do trade but do not manage to diversify and move up the value chain, less trade is not a solution either. Inward-looking policies that promote import substitution through domestic production are fiscally costly and may discourage innovation and increase the risk of trade retaliation from other economies, ultimately hindering long-term economic growth and inclusiveness.

Protectionism does not protect the overall economy, and it does not support overall inclusiveness. While trade-restrictive measures may protect some sectors and jobs from import competition, they do this at a high cost for the rest of the economy, which, consequently, will suffer from higher prices, lower incentives for innovation, and reduced competitiveness in exporting industries. Trade-restrictive measures can also lead to retaliatory measures from other economies, and these may threaten jobs supported by trade. In addition, strategies to relocate or reshore certain manufacturing industries may not, in reality, bring back many jobs, because the automation and digitalization of production processes are increasingly essential if firms are to remain competitive in international markets.

The second misleading assumption about globalization and inclusiveness is that WTO rules prevent governments from adopting ambitious policies that could promote development and inclusiveness. In fact, the overall objective of the WTO is to help its members to use trade as a means to raise living standards, create jobs and improve people's lives. In this context, the WTO already contributes to economic convergence and inclusiveness by promoting an open, rules-based and predictable multilateral trading system. Because economic reform is a condition of WTO membership, the WTO also contributes to improving governance. WTO members that implemented reforms and made deeper commitments during their WTO accession negotiations have grown, on average, 1.5 percentage points faster than they would have without those reforms and commitments.

Nothing in the WTO agreements restricts the use of non-discriminatory policies for development or inclusiveness. Many distortions that lead to unequal effects from trade-opening are often rooted in structural domestic factors that are best addressed through domestic complementary policies, such as labour, education or taxation policies. Trade-related instruments that some governments may choose to use for inclusiveness purposes, such as tariffs, subsidies and export restrictions, are subject to WTO disciplines to avoid potential negative spillovers onto other economies and potential retaliatory measures that would undermine overall inclusiveness. In addition, WTO agreements offer various flexibilities, including special and differential treatment (S&DT) provisions, which are only available to developing economies or least-developed countries (LDCs). A number of trade-related technical and capacity-building initiatives at the WTO, including the Aid for Trade initiative, also contribute to making trade more inclusive.

Nevertheless, although trade is part of the solution for a more resilient and inclusive global economy, trade alone may not be enough. A more inclusive global economy requires policies that reduce the barriers and obstacles that currently prevent marginalized individuals, firms, regions and economies from participating fully in and benefitting from global markets. Besides trade policies, to increase the market access of marginalized groups and economies, complementary policies are essential to enable individuals and firms to move to where the gains from trade are, and to share the gains from trade more evenly. Such complementarity policies may cover various aspects of the economy, including financial, labour, energy and housing markets. Many are relevant

for both economic growth and inclusiveness, as they address market distortions (e.g., competition), increase capacity to engage in international trade (e.g., via education) and mitigate the risks and disruption associated with trade openness (e.g., by providing economic safety nets). It is important to note that trade and domestic policies can reinforce each other. While trade policy effectiveness depends on well-designed complementary policies, open trade policies can also enhance the effectiveness of many of these complementary policies through economies of scale, improved efficiency and competition, enhanced economic growth and risk diversification.

The WTO already fosters inclusiveness across and within economies, but it can do even more. In a world increasingly fragmented by geopolitical tensions, maintaining an open and predictable multilateral trading system is essential to prevent the regression of progress achieved in economic convergence, and to support even greater development and inclusiveness. Economic fragmentation – unwinding trading relationships and turning to unilateral policies – would make the prospect of a more inclusive world more remote. To prevent this, Chapter D argues that the WTO could do more. First, it could play a more proactive role in facilitating the implementation of existing WTO agreements, such as the Trade Facilitation Agreement, which would unlock significant potential gains for developing economies. Second, it could improve predictability by means of an effective and fully functioning dispute settlement mechanism, given that binding commitments significantly reduce trade policy uncertainty, which in turn increases investments and fosters growth. Third, the WTO could enhance its efforts to address evolving trade challenges, particularly trade in digital, green and services sectors, to seize opportunities for convergence and inclusiveness through digital and environmental transformation.

Strengthening the WTO's deliberative and monitoring functions is important to ensure more inclusive trade. Uncoordinated unilateral

approaches to address the digital economy and the low-carbon transition can, depending on their design and implementation, create potential distortions and trade tensions. Solutions could also include improving data collection, research and information exchange on the negative spillovers across economies of unilateral policies and on the uneven effects of trade policy, and enhancing the participation of vulnerable groups in trade policy decision-making processes.

Enhancing coherence between the WTO and other international organizations could magnify their respective positive impacts on inclusiveness across and within economies.

Greater international cooperation is necessary to tackle emerging challenges in areas crucial to the future of trade for inclusiveness, such as services, digital and green trade. Many international organizations focus on complementary policies that could enable trade to support development and inclusiveness, such as investment, education, competition and taxation. Greater collaboration across international organizations could be helpful in the implementation of WTO commitments, by addressing infrastructure and skill gaps and facilitating the adjustment to trade openness. In turn, the open and predictable trading environment maintained by a reinforced multilateral trading system could help to amplify the positive impact of other international organizations on inclusiveness.

This year's World Trade Report has reviewed the key role that international trade and trade policy plays in supporting growth and inclusiveness.

Although some groups, regions and economies have not yet managed to integrate successfully into the global economy, trade is an essential element of the solution to move the global economy toward more equality and inclusivity. However, to achieve these aims, more coherent and mutually supportive national and international policies, and more global cooperation, are required.

Bibliography

- Aaronson, S. and Abouharb, M.R. (2014), "Does the WTO Help Member States Improve Governance?", *World Trade Review*, 13(3): 547–582.
- Abdih, Y. and Danninger, S. (2017), "What Explains the Decline of the U.S. Labor Share of Income? An Analysis of State and Industry Level Data", IMF Working Paper No. WP/17/167, Washington D.C.: International Monetary Fund (IMF).
- Abman, R. and Lundberg, C. (2020), "Does Free Trade Increase Deforestation? The Effects of Regional Trade Agreements", *Journal of the Association of Environmental and Resource Economists*, 7(1): 35–72.
- Abman, R.M., Lundberg, C.C., McLaren, J. and Ruta, M. (2023), "Child Labor Standards in Regional Trade Agreements: Theory and Evidence", NBER Working Paper No. 30908, Cambridge (MA): National Bureau of Economic Research (NBER).
- Aboushady, N., Harb, G. and Zaki, C. (2024), "Aid for Trade and Export Performance of Recipient Countries: The Moderating Role of Institutions", *The Journal of International Trade & Economic Development*, 1–29.
- Acemoglu, D. (2024), "The Simple Macroeconomics of AI", *Economic Policy*, Forthcoming.
- Acemoglu, D., Autor, D.H., Dorn, D., Hanson, G.H. and Price, B. (2016), "Import Competition and the Great US Employment Sag of the 2000s", *Journal of Labor Economics*, 34(S1): S141–S198.
- Acharya, A. (2022), "Hierarchies of Weakness: The Social Divisions That Hold Countries Back", *Foreign Affairs*, July/August 2022.
- Acosta, M. and Cox, L. (2024), "The Regressive Nature of the U.S. Tariff Code: Origins and Implications", Unpublished Manuscript, Cambridge (MA): Harvard University.
- Adão, R., Carrillo, P., Costinot, A., Donaldson, D. and Pomeranz, D. (2022), "Imports, Exports, and Earnings Inequality: Measures of Exposure and Estimates of Incidence", *The Quarterly Journal of Economics*, 137(3): 1553–1614.
- Adhvaryu, A., Bassi, V., Nyshadham, A. and Tamayo, J.A. (2020), "No Line Left Behind: Assortative Matching Inside the Firm", NBER Working Paper No. 27006, Cambridge (MA): National Bureau of Economic Research (NBER).
- African Climate Foundation (ACF) and Firoz Lalji Institute for Africa (2024), *Implications for African Countries of a Carbon Border Adjustment Mechanism in the EU - The African Climate Foundation*, Cape Town and London (UK): ACF and LSE.
- African Development Bank and African Export-Import Bank (2020), *Trade Finance in Africa: Trends Over the Past Decade and Opportunities Ahead*, Abidjan: African Development Bank.
- Aghion, P., Bloom, N., Blundell, R., Griffith, R. and Howitt, P. (2005), "Competition and Innovation: An Inverted-U Relationship", *The Quarterly Journal of Economics*, 120(2): 701–728.
- Ahn, J., Amiti, M. and Weinstein, D.E. (2011), "Trade Finance and the Great Trade Collapse", *American Economic Review*, 101(3): 298–302.
- Akcigit, U., Chen, W., Díez, F.J., Duval, R., Engler, P., Fan, J., Maggi, C., Tavares, M.M., Schwarz, D., Shibata, I. and Villegas-Sánchez, C. (2021), "Rising Corporate Market Power: Emerging Policy Issues", Staff Discussion Notes No. 2021/001, Washington, D.C.: International Monetary Fund (IMF).
- Aker, J.C. (2010), "Information from Markets Near and Far: Mobile Phones and Agricultural Markets in Niger", *American Economic Journal: Applied Economics*, 2(3): 46–59.
- Akwudike, H.C., Mac-Ozigbo, A. and Igbokwe-Ibeto, C.J. (2020), "Climate Change Impact on Business Opportunities in South East Nigeria", *International Journal of Development and Management Review*, 15(1): 282–296.
- Alessandria, G., Choi, H. and Ruhl, K.J. (2021), "Trade Adjustment Dynamics and the Welfare Gains from Trade", *Journal of International Economics*, 131: 103458.
- Alfaro, L. and Chor, D. (2023), "Global Supply Chains: The Looming 'Great Reallocation'", NBER Working Paper No. 31661, Cambridge (MA): National Bureau of Economic Research (NBER).
- Alfaro-Serrano, D., Balantrapu, T., Chaurey, R., Goicoechea, A. and Verhoogen, E. (2021), "Interventions to Promote Technology Adoption in Firms: A Systematic Review", *Campbell Systematic Reviews*, 17(4): e1181.
- Alfaro Ureña, A., Faber, B., Gaubert, C., Manelici, I. and Vasquez, J.P. (2022), "Responsible Sourcing? Theory and Evidence from Costa Rica", NBER Working Paper No. 30683, Cambridge (MA): National Bureau of Economic Research (NBER).
- Alfaro Ureña, A., Manelici, I. and Vasquez, J.P. (2022), "The Effects of Joining Multinational Supply Chains: New Evidence from Firm-to-Firm Linkages", *The Quarterly Journal of Economics*, 137(3): 1495–1552.
- Allen, T. (2014), "Information Frictions in Trade", *Econometrica*, 82(6): 2041–2083.
- Amini, C. and Bianco, S.D. (2016), "Poverty, Growth, Inequality and Pro-Poor Factors: New Evidence From Macro Data", *The Journal of Developing Areas*, 50(2): 231–254.
- Amior, M. (2024), "Education and Geographical Mobility: The Role of the Job Surplus", *American Economic Journal: Economic Policy*, Forthcoming.
- Amiti, M. and Davis, D.R. (2012), "Trade, Firms, and Wages: Theory and Evidence", *The Review of Economic Studies*, 79(1): 1–36.
- Amiti, M. and Konings, J. (2007), "Trade Liberalization, Intermediate Inputs, and Productivity: Evidence from Indonesia", *American Economic Review*, 97(5): 1611–1638.
- Amodio, F. and Roux, N. de (2024), "Measuring Labor Market Power in Developing Countries: Evidence from Colombian Plants", *Journal of Labor Economics*, Forthcoming.
- Amodio, F., Medina, P. and Morlacco, M. (2022), "Labor Market Power, Self-Employment, and Development", IZA Discussion Paper No. 15477, Bonn (DE): Institute of Labor Economics (IZA).
- Anderson, K. (2013), "Agricultural Price Distortions: Trends and Volatility, Past, and Prospective", *Agricultural Economics*, 44(s1): 163–171.
- Anderson, K., Corong, E., Strutt, A. and Valenzuela, E. (2023), "The Relative Importance of Global Agricultural Subsidies and Tariffs, Revisited", *World Trade Review*, 22(3–4): 382–394.
- Anderson, K., Martin, W. and Valenzuela, E. (2006), "The Relative Importance of Global Agricultural Subsidies and Market Access", *World Trade Review*, 5(3): 357–376.
- Anderson, R.D., Muller, A.C., Kovacic, W.E. and Sporysheva, N. (2018), "Competition Policy, Trade and the Global Economy: Existing WTO Elements, RTA Commitments, Current Challenges and Issues for Reflection", Staff Working Paper No. ERS-2018-12, Geneva: World Trade Organization (WTO).
- Anne, C., Chalendard, C., Fernandes, A.M., Rijkers, B. and Vicard, V. (2023), "Containing Tariff Evasion", Policy Research Working Paper No. 10606, Washington, D.C.: World Bank.
- Anton, B. (2024), "Microsoft and G42 Set to Build Data Center in Kenya Utilizing Geothermal Energy", *Renewable Energy Magazine*, 24 May 2024.
- Antràs, P. and Foley, C.F. (2015), "Poultry in Motion: A Study of International Trade Finance Practices", *Journal of Political Economy*, 123(4): 853–901.
- Antràs, P., Garicano, L. and Rossi-Hansberg, E. (2006), "Offshoring in a Knowledge Economy", *The Quarterly Journal of Economics*, 121(1): 31–77.
- Arias, J., Artuç, E., Lederman, D. and Rojas, D. (2018), "Trade, Informal Employment and Labor Adjustment Costs", *Journal of Development Economics*, 133: 396–414.

- Arisoy, B. (2022), "Digitalization in Education", *Cypriot Journal of Educational Sciences*, 17(5): 1799–1811.
- Ariu, A., Hakkala, K.N., Jensen, J.B. and Tamminen, S. (2019), "Service Imports, Workforce Composition, and Firm Performance: Evidence from Finnish Microdata", NBER Working Paper No. 26355, Cambridge (MA): National Bureau of Economic Research (NBER).
- Armangue-Jubert, T., Guner, N. and Ruggieri, A. (2024), "Labor Market Power and Development", *American Economic Review: Insights*, Forthcoming.
- Arni, P., Egger, P., Erhardt, K., Gubler, M. and Sauré, P. (2024), "Heterogeneous Impacts of Trade Shocks on Workers", CEPR Discussion Paper No. 19017, London (UK): Centre for Economic Policy Research (CEPR).
- Arnold, J.M., Javorcik, B.S. and Mattoo, A. (2011), "Does Services Liberalization Benefit Manufacturing Firms? Evidence from the Czech Republic", *Journal of International Economics*, 85(1): 136–146.
- Arnold, J.M., Javorcik, B.S., Lipscomb, M. and Mattoo, A. (2015), "Services Reform and Manufacturing Performance: Evidence from India", *The Economic Journal*, 126(590): 1–39.
- Artuç, E., Brambilla, I. and Porto, G. (2022), "Patterns of Labour Market Adjustment to Trade Shocks with Imperfect Capital Mobility", *The Economic Journal*, 132(646): 2048–2074.
- Artuç, E., Chaudhuri, S. and McLaren, J. (2010), "Trade Shocks and Labor Adjustment: A Structural Empirical Approach", *American Economic Review*, 100(3): 1008–1045.
- Artuç, E., Depetris Chauvin, N., Porto, G. and Rijkers, B. (2023), "Protectionism and Gender Inequality in Developing Countries", *Journal of Globalization and Development*, 14(2): 177–222.
- Artuç, E., Lederman, D. and Porto, G. (2015), "A Mapping of Labor Mobility Costs in the Developing World", *Journal of International Economics*, 95(1): 28–41.
- Artuç, E., Porto, G. and Rijkers, B. (2019), "Trading Off the Income Gains and the Inequality Costs of Trade Policy", *Journal of International Economics*, 120: 1–45.
- Artuç, E., Porto, G. and Rijkers, B. (2021), "Household Impacts of Tariffs: Data and Results from Agricultural Trade Protection", *The World Bank Economic Review*, 35(3): 563–585.
- Atkin, D. and Donaldson, D. (2015), "Who's Getting Globalized? The Size and Implications of Intra-national Trade Costs", NBER Working Paper No. 21439, Cambridge (MA): National Bureau of Economic Research (NBER).
- Atkin, D., Amit, K. and Osman, A. (2017), "Exporting and Firm Performance: Evidence from a Randomized Experiment", *The Quarterly Journal of Economics*, 132(2): 551–615.
- Atkin, D., Khandelwal, A., Boudreau, L., Dix-Carneiro, R., Manelici, I., Medina, P., McCaig, B., Morjaria, A., Pascali, L., Rijkers, B. and Startz, M. (2022), "International Trade", *VoxDevLit*, 4(1): 1–45.
- Atkinson, A.B., Piketty, T. and Saez, E. (2011), "Top Incomes in the Long Run of History", *Journal of Economic Literature*, 49(1): 3–71.
- Auboin, M., Bekkers, E. and de Quarti, D. (2023), "A Novel Framework to Evaluate Changes in Access to and Costs of Trade Finance", Staff Working Paper No. ERSD-2023-01, Geneva: World Trade Organization (WTO).
- Auer, R., Burstein, A., Lein, S. and Vogel, J. (2024), "Unequal Expenditure Switching: Evidence from Switzerland", *The Review of Economic Studies*, Forthcoming.
- Augier, P., Cadot, O. and Dovis, M. (2013), "Imports and TFP at the Firm level: the Role of Absorptive Capacity", *Canadian Journal of Economics/Revue Canadienne d'Economique*, 46(3): 956–981.
- Ausubel, L.M., Cramton, P. and Deneckere, R.J. (2002), "Bargaining with Incomplete Information", in Aumann, R. J. and Hart, S. (eds.). *Handbook of Game Theory with Economic Applications*, Amsterdam: North-Holland Publishing Co..
- Autor, D., Dorn, D. and Hanson, G.H. (2023), "Trading Places: Mobility Responses of Native and Foreign-Born Adults to the China Trade Shock", NBER Working Paper No. 30904, Cambridge (MA): National Bureau of Economic Research (NBER).
- Autor, D.H., Beck, A., Dorn, D. and Hanson, G.H. (2024), "Help for the Heartland? The Employment and Electoral Effects of the Trump Tariffs in the United States", NBER Working Paper No. 32082, Cambridge (MA): National Bureau of Economic Research (NBER).
- Autor, D.H., Dorn, D. and Hanson, G. (2021), "On the Persistence of the China Shock", NBER Working Paper No. 29401, Cambridge (MA): National Bureau of Economic Research (NBER).
- Autor, D.H., Dorn, D. and Hanson, G.H. (2013), "The China Syndrome: Local Labor Market Effects of Import Competition in the United States", *American Economic Review*, 103(6): 2121–2168.
- Autor, D.H., Dorn, D., Hanson, G.H. and Song, J. (2014), "Trade Adjustment: Worker-Level Evidence", *The Quarterly Journal of Economics*, 129(4): 1799–1860.
- Autor, D.H., Dorn, D., Katz, L.F., Patterson, C. and Van Reenen, J. (2020), "The Fall of the Labor Share and the Rise of Superstar Firms", *The Quarterly Journal of Economics*, 135(2): 645–709.
- Autor, D.H., Dube, A. and McGrew, A. (2023), "The Unexpected Compression: Competition at Work in the Low Wage Labor Market", NBER Working Paper No. 31010, Cambridge (MA): National Bureau of Economic Research (NBER).
- Aw, B.Y., Roberts, M.J. and Xu, D.Y. (2011), "R&D Investment, Exporting, and Productivity Dynamics", *American Economic Review*, 101(4): 1312–1344.
- Azzopardi-Muscat, N. and Sørensen, K. (2019), "Towards an Equitable Digital Public Health Era: Promoting Equity Through a Health Literacy Perspective", *European Journal of Public Health*, 29(S3): 13–17.
- Bacchetta, M. and Stolzenburg, V. (2019), "Trade, Value Chains and Labor Markets in Advanced Economies", in *GVC Development Report 2019: Technical Innovation, Supply Chain Trade, and Workers in a Globalized World*, Geneva: World Trade Organization (WTO).
- Bacchetta, M., Bekkers, E., Piermartini, R., Rubinova, S., Stolzenburg, V. and Xu, A. (2024), "COVID-19 and Global Value Chains: A Discussion of Arguments on Value Chain Organisation and the Role of the WTO", *The World Economy*, Forthcoming.
- Bacchetta, M., Milet, E.M. and Monteiro, J.-A. (2019), *Making Globalization More Inclusive: Lessons from Experience with Adjustment*. Geneva: World Trade Organization (WTO).
- Baccini, L., Impullitti, G. and Malesky, E.J. (2019), "Globalization and State Capitalism: Assessing Vietnam's Accession to the WTO", *Journal of International Economics*, 119: 75–92.
- Bagwell, K. and Staiger, R.W. (1999), "An Economic Theory of GATT", *American Economic Review*, 89(1): 215–248.
- Bagwell, K. and Staiger, R.W. (2006), "Will International Rules on Subsidies Disrupt the World Trading System?", *American Economic Review*, 96(3): 877–895.
- Bagwell, K. and Staiger, R.W. (2014), "Can the Doha Round be a Development Round? Setting a Place at the Table", in Feenstra, R. C. and Taylor, A. M. (eds.). *Globalization in an Age of Crisis: Multilateral Economic Cooperation in the Twenty-First Century*, Chicago (IL): University of Chicago Press.
- Bakker, J.D., Datta, N., Davies, R. and De Lyon, J. (2022), "Non-tariff Barriers and Consumer Prices: Evidence from Brexit", CEP Discussion Paper No. 1888, London (UK): Centre for Economic Performance (CEP).
- Bakker, J.D., Garcia Marin, A., Potlogea, A.V., Voigtländer, N. and Yang, Y. (2024), "Cities, Heterogeneous Firms, and Trade", NBER Working Paper No. 32377, Cambridge (MA): National Bureau of Economic Research (NBER).
- Baldwin, R.E. (2016), *The Great Convergence: Information Technology and the New Globalization*, Cambridge (MA): Harvard University Press.
- Baldwin, R.E. (2019), *The Globalbots Upheaval: Globalization, Robotics, and the Future of Work*, London (UK): Orion Publishing Co.
- Baldwin, R.E. and Robert-Nicoud, F. (2014), "Trade-in-Goods and Trade-in-Tasks: An Integrating Framework", *Journal of International Economics*, 92(1): 51–62.

- Balistreri, E.J. and Olekseyuk, Z. (2024), "Investment Facilitation for Development Agreement: Potential Gains", Unpublished Manuscript, Lincoln (NE): University of Nebraska-Lincoln.
- Bank for International Settlements (BIS) (2014), "Trade Finance: Developments and Issues", CGFS Papers No. 50, Basel: BIS.
- Basco, S., Liegey, M., Mestieri, M. and Smagghue, G. (2024), "The Heterogeneous Effects of Trade across Occupations", *Journal of International Economics*, Forthcoming.
- Baseler, T. (2023), "Hidden Income and the Perceived Returns to Migration", *American Economic Journal: Applied Economics*, 15(4): 321–352.
- Baumgarten, D. (2013), "Exporters and the Rise in Wage Inequality: Evidence from German Linked Employer–Employee Data", *Journal of International Economics*, 90(1): 201–217.
- Beck, S., Kim, K., Latoja, M.C., Malaket, A., Pandey, A. and Tayag, M.C. (2023), *2023 Trade Finance Gaps, Growth, and Jobs Survey*, Manila: Asian Development Bank (ADB).
- Bekkers, E. and Cariola, G. (2024), "The Impact of LDC Graduation on Trade: A Quantitative Assessment", *The Journal of International Trade & Economic Development*, 1-31.
- Bekkers, E., Jhunjhunwala, K., Métivier, J., Stolzenburg, V. and Yilmaz, A.N. (2024), "Trade Policy Bias and the Gender Wage Gap", Unpublished Manuscript, Geneva: World Trade Organization (WTO).
- Bekkers, E., Kalachyhin, H. and Teh, R. (2024), "The Long-Run Impact of Digitalization and Artificial Intelligence on Trade Patterns", Unpublished Manuscript, Geneva: World Trade Organization (WTO).
- Bekkers, E., Yilmaz, A.N., Bacchetta, M., Ferrero, M., Jhunjhunwala, K., Métivier, J., Okogu, B., Ramos, D., Tresa, E. and Xu, A. (2024), "A Global Framework for Climate Mitigation Policies: A Technical Contribution to the Discussion on Carbon Pricing and Equivalent Policies in Open Economies", Staff Working Paper No. ERSD-2024-03, Geneva: World Trade Organization (WTO).
- Bell, M., Charles-Edwards, E., Ueffing, P., Stillwell, J., Kupiszewski, M. and Kupiszewska, D. (2015), "Internal Migration and Development: Comparing Migration Intensities Around the World", *Population and Development Review*, 41(1): 33–58.
- Bellucci, C., Rubínová, S. and Piermartini, R. (2023), "Better Together: How Digital Connectivity and Regulation Reduce Trade Costs", Staff Working Paper No. ERSD-2023-07, Geneva: World Trade Organization (WTO).
- Benfica, R. and Henderson, H. (2021), "The Effect of the Sectoral Composition of Economic Growth on Rural and Urban Poverty", *Review of Income and Wealth*, 67(1): 248–284.
- Benmelech, E., Bergman, N. and Kim, H. (2018), "Strong Employers and Weak Employees: How Does Employer Concentration Affect Wages?", NBER Working Paper No. 24307, Cambridge (MA): National Bureau of Economic Research (NBER).
- Bergquist, L.F. and Dinerstein, M. (2020), "Competition and Entry in Agricultural Markets: Experimental Evidence from Kenya", *American Economic Review*, 110(12): 3705–3747.
- Berman, N., Couttenier, M., Rohner, D. and Thoenig, M. (2017), "This Mine is Mine! How Minerals Fuel Conflicts in Africa", *American Economic Review*, 107(6): 1564–1610.
- Bernard, A.B., Jensen, J.B., Redding, S.J. and Schott, P.K. (2007), "Firms in International Trade", *Journal of Economic Perspectives*, 21(3): 105–130.
- Beverelli, C., Gourevich, I., Heiland, I., Keck, A., Larch, M. and Yotov, Y.V. (2023), "Trade and Welfare Effects of the WTO Trade Facilitation Agreement", Staff Working Paper No. ERSD-2023-04, Geneva: World Trade Organization (WTO).
- Bhattacharya, A., Dooley, M., Kharas, H. and Taylor, C. (2022), *Financing a big investment push in emerging markets and developing countries for sustainable, resilient and inclusive recovery and growth*, London (UK) and Washington, D.C.: Grantham Research Institute on Climate Change and the Environment and Brookings Institution.
- Bick, A., Blandin, A., Mertens, K. and Rubinton, H. (2024), "Work from Home and Interstate Migration", Federal Reserve Bank of St. Louis Working Paper No. 2024-012, St. Louis (MO): Federal Reserve Bank of St. Louis.
- Bilir, L.K., Chor, D. and Manova, K. (2019), "Host-Country Financial Development and Multinational Activity", *European Economic Review*, 115: 192–220.
- Blanchard, P., Gollin, D. and Kirchberger, M. (2023), "Perpetual Motion: High-frequency Human Mobility in Three African Countries", Trinity Economics Paper No. 0823, Dublin: Trinity College.
- Blanga-Gubbay, M. and Rubínová, S. (2023), "Foreign Direct Investment, Trade and Economic Development: An Overview", Staff Working Paper No. ERSD-2023-11, Geneva: World Trade Organization (WTO).
- Bloom, N., Eifert, B., Mahajan, A., McKenzie, D. and Roberts, J. (2013), "Does Management Matter? Evidence from India", *The Quarterly Journal of Economics*, 128(1): 1–51.
- Bloom, N., Mahajan, A., McKenzie, D. and Roberts, J. (2020), "Do Management Interventions Last? Evidence from India", *American Economic Journal: Applied Economics*, 12(2): 198–219.
- Boas, H.F., Johannesen, N., Kreiner, C.T., Larsen, L.T. and Zucman, G. (2024), "Taxing Capital in a Globalized World: The Effects of Automatic Information Exchange", NBER Working Paper No. 32714, Cambridge (MA): National Bureau of Economic Research (NBER).
- Boehm, C.E., Levchenko, A.A. and Pandalai-Nayar, N. (2023), "The Long and Short (Run) of Trade Elasticities", *American Economic Review*, 113(4): 861–905.
- Bold, T., Ghisolfi, S., Nsonzi, F. and Svensson, J. (2022), "Market Access and Quality Upgrading: Evidence from Four Field Experiments", *American Economic Review*, 112(8): 2518–2552.
- Bøler, E.A., Javorcik, B. and Ulitveit-Moe, K.H. (2018), "Working Across Time Zones: Exporters and the Gender Wage Gap", *Journal of International Economics*, 111: 122–133.
- Bombardini, M., Orefice, G. and Tito, M.D. (2019), "Does Exporting Improve Matching? Evidence from French Employer–Employee Data", *Journal of International Economics*, 117: 229–241.
- Bonadio, B., Brühlhart, M., Cadot, O. and Rais, G. (2023), "And There Was Light: Trade and the Development of Border Regions", Unpublished Manuscript, Lausanne: University of Lausanne.
- Borchert, I., Gootiiz, B., Grover Goswami, A. and Mattoo, A. (2017), "Services Trade Protection and Economic Isolation", *The World Economy*, 40(3): 632–652.
- Borusyak, K. and Jaravel, X. (2021), "The Distributional Effects of Trade: Theory and Evidence from the United States", NBER Working Paper No. 28957, Cambridge (MA): National Bureau of Economic Research (NBER).
- Borusyak, K. and Jaravel, X. (2024), "Are Trade Wars Class Wars? The Importance of Trade-induced Horizontal Inequality", *Journal of International Economics*, Forthcoming.
- Boudreau, L. (2024), "Multinational Enforcement of Labor Law: Experimental Evidence on Strengthening Occupational Safety and Health (OSH) Committees", *Econometrica*, forthcoming.
- Boudreau, L., Cajal-Grossi, J. and Macchiavello, R. (2023), "Global Value Chains in Developing Countries: A Relational Perspective from Coffee and Garments", *Journal of Economic Perspectives*, 37(3): 59–86.
- Bradford, A. (2012), "The Brussels Effect", *Northwestern University Law Review*, 107: 1–68.
- Brambilla, I., Depetris Chauvin, N. and Porto, G. (2017), "Examining the Export Wage Premium in Developing Countries", *Review of International Economics*, 25(3): 447–475.
- Brambilla, I., Dix-Carneiro, R., Lederman, D. and Porto, G. (2012), "Skills, Exports, and the Wages of Seven Million Latin American Workers", *The World Bank Economic Review*, 26(1): 34–60.
- Brandt, L., Van Biesebroeck, J., Wang, L. and Zhang, Y. (2017), "WTO Accession and Performance of Chinese Manufacturing Firms", *American Economic Review*, 107(9): 2784–2820.
- Branstetter, L. and Maskus, K.E. (2022), "Global Knowledge Flows, Absorptive Capacity and Capability Acquisition: Old Ideas, Recent Evidence and New Approaches", in Taubman, A. and Watal, J. (eds.), *Trade in Knowledge*, Cambridge (UK): Cambridge University Press.

- Branstetter, L.G., Fisman, R. and Foley, C.F. (2006), "Do Stronger Intellectual Property Rights Increase International Technology Transfer? Empirical Evidence from U. S. Firm-Level Panel Data", *The Quarterly Journal of Economics*, 121(1): 321–358.
- Bräuer, R. and Kersting, F. (2024), "Trade Shocks, Labour Markets and Migration in the First Globalisation", *The Economic Journal*, 134(657): 135–164.
- Broda, C., Limão, N. and Weinstein, D.E. (2008), "Optimal Tariffs and Market Power: The Evidence", *American Economic Review*, 98(5): 2032–2065.
- Brotto, A., Jakubik, A. and Piermartini, R. (2021), "WTO Accession and Growth: Tang and Wei Redux", Staff Working Paper No. ERSD-2023-11, Geneva: World Trade Organization (WTO).
- Brotto, A., Jakubik, A., Piermartini, R. and Silvy, F. (2024), "Committing to Grow: The Full Impact of WTO Accessions", Staff Working Paper No. ERSD-2024-06, Geneva: World Trade Organization (WTO).
- Brugués, F. (2023), "Take the Goods and Run: Contracting Frictions and Market Power in Supply Chains", Unpublished Manuscript, Providence (RI): Brown University.
- Buera, F.J. and Oberfield, E. (2020), "The Global Diffusion of Ideas", *Econometrica*, 88(1): 83–114.
- Bureau, J.-C., Jean, S. and Matthews, A. (2006), "The Consequences Of Agricultural Trade Liberalization For Developing Countries: Distinguishing Between Genuine Benefits And False Hopes", *World Trade Review*, 5(2): 225–249.
- Burstein, A. and Vogel, J. (2017), "International Trade, Technology, and the Skill Premium", *Journal of Political Economy*, 125(5): 1356–1412.
- Bustos, P. (2011), "Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms", *American Economic Review*, 101(1): 304–340.
- Buys, P., Dasgupta, S., Thomas, T.S. and Wheeler, D. (2009), "Determinants of a Digital Divide in Sub-Saharan Africa: A Spatial Econometric Analysis of Cell Phone Coverage", *World Development*, 37(9): 1494–1505.
- Cadot, O., Disdier, A.-C., Jaud, M. and Suwa-Eisenmann, A. (2014), "Export Big Hits: Self-Discovery, Demand Shocks, or Idiosyncratic?", Working Paper No. F-43108-UGA-2, London (UK): International Growth Centre (IGC).
- Cai, J., Li, N. and Santacreu, A.M. (2022), "Knowledge Diffusion, Trade, and Innovation Across Countries and Sectors", *American Economic Journal: Macroeconomics*, 14(1): 104–145.
- Caliendo, L. and Parro, F. (2023), "Lessons from US–China Trade Relations", *Annual Review of Economics*, 15(1): 513–547.
- Caliendo, L., Dvorkin, M. and Parro, F. (2019), "Trade and Labor Market Dynamics: General Equilibrium Analysis of the China Trade Shock", *Econometrica*, 87(3): 741–835.
- Canadian Council for Aboriginal Business and Global Affairs Canada (2023), *Adâwe: Export Experiences of Indigenous Entrepreneurs*, Ottawa: Global Affairs Canada.
- Carballo, J., Graziano, A.G., Schaur, G. and Martincus, C.V. (2022), "The Effects of Transit Systems on International Trade", *The Review of Economics and Statistics*, 1–41.
- Carballo, J., Ottaviano, G.I.P. and Volpe Martincus, C. (2018), "The Buyer Margins of Firms' Exports", *Journal of International Economics*, 112: 33–49.
- Cariola, G. and Lanz, R. (2022), "Preference Utilization in the Global Economy: An Empirical Analysis", Staff Working Paper No. ERSD-2022-4, Geneva: World Trade Organization (WTO).
- Cariolle, J. and da Piedade, C. (2023), "Digital Connectedness and Exports Upgrading: Is Sub-Saharan Africa Catching Up?", *The World Economy*, 46(11): 3325–3344.
- Carleton, T., Jina, A., Delgado, M., Greenstone, M., Houser, T., Hsiang, S., Hultgren, A., Kopp, R.E., McCusker, K.E., Nath, I., Rising, J., Rode, A., Seo, H.K., Viaene, A., Yuan, J. and Zhang, A.T. (2022), "Valuing the Global Mortality Consequences of Climate Change Accounting for Adaptation Costs and Benefits", *The Quarterly Journal of Economics*, 137(4): 2037–2105.
- Carrère, C., Olarreaga, M. and Raess, D. (2022), "Labor Clauses In Trade Agreements: Hidden Protectionism?", *The Review of International Organizations*, 17(3): 453–483.
- Carroll, D.R. and Hur, S. (2020), "On the Heterogeneous Welfare Gains and Losses from Trade", *Journal of Monetary Economics*, 109: 1–16.
- Castillo, A., Garcia-Marin, A. and Tapia, M. (2023), "Labor-Market Concentration and Workers Outcomes: Evidence from Chile", Paper for the XXVIII Meeting of the Central Banks Researchers Network, Mexico City: Center for Latin American Monetary Studies (CEMLA).
- Ceddia, M.G., Gunter, U. and Paziienza, P. (2019), "Indigenous Peoples' Land Rights and Agricultural Expansion in Latin America: A Dynamic Panel Data Approach", *Forest Policy and Economics*, 109: 102001.
- Cerdeiro, D.A. and Komaromi, A. (2021), "Trade and Income in the Long Run: Are There Really Gains, and Are They Widely Shared?", *Review of International Economics*, 29(4): 703–731.
- Cernat, L. (2023), "How Valuable Is WTO Transparency: The 15 Trillion Dollar Question". Brussels: European Centre for International Political Economy (ECIPE).
- Cernat, L., Laird, S., Monge-Roffarello, L. and Turrini, A. (2003), "The EU's Everything But Arms Initiative and the Least-developed Countries", WIDER Discussion Paper No. 2003/47, Helsinki: United Nations University World Institute for Development Economics Research (UNU-WIDER).
- Céspedes, L.F., Parrado, E. and Velasco, A. (2014), "Fiscal Rules and the Management of Natural Resource Revenues: The Case of Chile", *Annual Review of Resource Economics*, 6(1): 105–132.
- Chalendard, C., Fernandes, A.M., Raballand, G. and Rijkers, B. (2023), "Corruption in Customs", *The Quarterly Journal of Economics*, 138(1): 575–636.
- Chancel, L. and Piketty, T. (2021), "Global Income Inequality, 1820–2020: the Persistence and Mutation of Extreme Inequality", *Journal of the European Economic Association*, 19(6): 3025–3062.
- Chancel, L., Piketty, T., Saez, E. and Zucman, G. (2021), *World Inequality Report 2022*, Paris: World Inequality Lab.
- Cherkashin, I., Demidova, S., Kee, H.L. and Krishna, K. (2015), "Firm Heterogeneity and Costly Trade: A New Estimation Strategy and Policy Experiments", *Journal of International Economics*, 96(1): 18–36.
- Chetty, R., Friedman, J., Saez, E., Turner, N. and Yagan, D. (2020), "Income Segregation and Intergenerational Mobility Across Colleges in the United States", *The Quarterly Journal of Economics*, 135(3): 1567–1633.
- Chetty, R., Hendren, N., Kline, P. and Saez, E. (2014), "Where is the land of Opportunity? The Geography of Intergenerational Mobility in the United States", *The Quarterly Journal of Economics*, 129(4): 1553–1623.
- Chi, M. (2021), "Regulation of Special Economic Zones Through Regional Trade Agreements: Confronting the Synergy Issue", *Journal of International Economic Law*, 24(2): 423–442.
- Chiang, T.C. (2022), "The Effects of Economic Uncertainty, Geopolitical Risk and Pandemic Upheaval on Gold Prices", *Resources Policy*, 76: 102546.
- Choi, J. and Levchenko, A. (2021), "The Long-Term Effects of Industrial Policy", NBER Working Paper No. 29263, Cambridge (MA): National Bureau of Economic Research (NBER).
- Chowdhury, A., Liu, X., Wang, M. and Wong, M.C.S. (2021), "The Role of Multilateralism of the WTO in International Trade Stability", *World Trade Review*, 20(5): 668–689.
- Cirera, X., Comin, D. and Cruz, M. (2022), *Bridging the Technological Divide: Technology Adoption by Firms in Developing Countries*, Washington, D.C.: World Bank.
- Colantone, I. and Stanig, P. (2018), "The Trade Origins of Economic Nationalism: Import Competition and Voting Behavior in Western Europe", *American Journal of Political Science*, 62(4): 936–953.
- Colonnelli, E., Loiacono, F., Muhumza, E. and Teso, E. (2024), "Do Information Frictions and Corruption Perceptions Kill Competition?"

- A Field Experiment On Public Procurement in Uganda”, NBER Working Paper No. 32170, Cambridge (MA): National Bureau of Economic Research (NBER).
- Comin, D. and Mestieri, M. (2013), “Technology Diffusion: Measurement, Causes and Consequences”, in Aghion, P. and Durlauf, S. (eds.). *Handbook of Economic Growth*, Amsterdam: North-Holland.
- Corlett, A. (2016), *Examining an Elephant: Globalisation and the Lower Middle Class of the Rich World*, London (UK): Resolution Foundation.
- Corley-Coulibaly, M., Ebertand, F.C. and Pelin Sekerler, R. (2023), *Integrating Trade and Decent Work Volume II: The Potential of Trade and Investment Policies to Address Labour Market Issues in Supply Chains*, Geneva: International Labour Organization (ILO).
- Corley-Coulibaly, M., Postolachi, I. and Tesfay, N. (2021), “A Multifaceted Typology of Labour Provisions in Trade Agreements: Overview, Methodology and Trends”, Geneva: International Labour Office (ILO).
- Corral, P., Irwin, A., Krishnan, N., Mahler, D.G. and Vishwanath, T. (2020), *Fragility and Conflict: On the Front Lines of the Fight Against Poverty*. Washington, D.C.: World Bank.
- Coşar, A.K. and Fajgelbaum, P.D. (2016), “Internal Geography, International Trade, and Regional Specialization”, *American Economic Journal: Microeconomics*, 8(1): 24–56.
- Coşar, A.K., Guner, N. and Tybout, J. (2016), “Firm Dynamics, Job Turnover, and Wage Distributions in an Open Economy”, *American Economic Review*, 106(3): 625–663.
- Costa, F., Garred, J. and Pessoa, J.P. (2016), “Winners and Losers from a Commodities-for-Manufactures Trade Boom”, *Journal of International Economics*, 102: 50–69.
- Costinot, A., Sarvimäki, M. and Vogel, J. (2024), “The Local Scarring Effect of Negative Trade Shocks: Evidence from the Collapse of Finnish-Soviet Trade”, Unpublished Manuscript, Cambridge (MA): Massachusetts Institute of Technology (MIT).
- Crecente, F., Sarabia, M. and Teresa Del Val, M. (2021), “Climate Change Policy and Entrepreneurial Opportunities”, *Technological Forecasting and Social Change*, 163: 120446.
- Crinò, R. (2010), “Employment Effects of Service Offshoring: Evidence from Matched Firms”, *Economics Letters*, 107(2): 253–256.
- Damioli, G., Van Roy, V. and Vertesy, D. (2021), “The Impact of Artificial Intelligence on Labor Productivity”, *Eurasian Business Review*, 11(1): 1–25.
- Das, S., Roberts, M.J. and Tybout, J.R. (2007), “Market Entry Costs, Producer Heterogeneity, and Export Dynamics”, *Econometrica*, 75(3): 837–873.
- Dauth, W., Findeisen, S. and Suedekum, J. (2014), “The Rise of the East and the Far East: German Labor Markets and Trade Integration”, *Journal of the European Economic Association*, 12(6): 1643–1675.
- de Crombrughe, A. (2019), “Supporting Investment Climate Reforms Through Policy Advocacy”, OECD Investment Insights, Paris: Organization for Economic Cooperation and Development (OECD).
- de Dios, L.C. (2009), “The Impact of Information Technology in Trade Facilitation on Small and Medium Enterprises in the Philippines”, ARTNeT Working Paper Series No. 74, Bangkok: Asia-Pacific Research and Training Network on Trade (ARTNeT).
- De Loecker, J., Goldberg, P.K., Khandelwal, A.K. and Pavcnik, N. (2016), “Prices, Markups, and Trade Reform”, *Econometrica*, 84(2): 445–510.
- Delgado, M. and Kyle, M. (2022), “Trade in Intellectual Property-Intensive Goods”, in Taubman, A. and Watal, J. (eds.). *Trade in Knowledge*, Cambridge (UK): Cambridge University Press.
- Dell, M., Jones, B.F. and Olken, B.A. (2012), “Temperature Shocks and Economic Growth: Evidence from the Last Half Century”, *American Economic Journal: Macroeconomics*, 4(3): 66–95.
- Devereux, M.P., Griffith, R. and Klemm, A. (2002), “Corporate Income Tax Reforms and International Tax Competition”, *Economic Policy*, 17(35): 449–495.
- Dhingra, S. and Tenreyro, S. (2020), “The Rise of Agribusiness and the Distributional Consequences of Policies on Intermediated Trade”, CEP Discussion Paper No. 1677, London (UK): Centre for Economic Performance (CEP).
- Diao, X., Ellis, M., McMillan, M.S. and Rodrik, D. (2021), “Africa’s Manufacturing Puzzle: Evidence from Tanzanian and Ethiopian Firms”, NBER Working Paper No. 28344, Cambridge (MA): National Bureau of Economic Research (NBER).
- DiCaprio, A., Kim, K. and Beck, S. (2017), “2017 Trade Finance Gaps, Growth, and Jobs Survey”, ADB Briefs No. 83, Manila: Asian Development Bank (ADB).
- Dieppe, A. (2021), *Global Productivity: Trends, Drivers, and Policies*, Washington, D.C.: World Bank.
- Ding, S., Lashkaripour, A. and Lugovskyy, V. (2024), “A Global Perspective on the Incidence of Monopoly Distortions”, Unpublished Manuscript, Bloomington (IN): Indiana University.
- Dix-Carneiro, R. (2014), “Trade Liberalization and Labor Market Dynamics”, *Econometrica*, 82(3): 825–885.
- Dix-Carneiro, R. and Kovak, B.K. (2017), “Trade Liberalization and Regional Dynamics”, *American Economic Review*, 107(10): 2908–2946.
- Dix-Carneiro, R. and Kovak, B.K. (2019), “Margins of Labor Market Adjustment to Trade”, *Journal of International Economics*, 117(C): 125–142.
- Dix-Carneiro, R., Goldberg, P.K., Meghir, C. and Ulyssea, G. (2024), “Trade and Domestic Distortions: the Case of Informality”, NBER Working Paper No. 28391, Cambridge (MA): National Bureau of Economic Research (NBER).
- Djankov, S., Freund, C. and Pham, C.S. (2010), “Trading on Time”, *The Review of Economics and Statistics*, 92(1): 166–173.
- Djankov, S., McLiesh, C. and Shleifer, A. (2007), “Private Credit in 129 countries”, *Journal of Financial Economics*, 84(2): 299–329.
- Dollar, D., Kleineberg, T. and Kraay, A. (2016), “Growth Still Is Good for the Poor”, *European Economic Review*, 81(C): 68–85.
- Donaldson, D. (2015), “The Gains from Market Integration”, *Annual Review of Economics*, 7: 619–647.
- Dragusanu, R., Montero, E. and Nunn, N. (2022), “The Effects of Fair Trade Certification: Evidence from Coffee Producers in Costa Rica”, *Journal of the European Economic Association*, 20(4): 1743–1790.
- Duranton, G. and Puga, D. (2000), “Diversity and Specialisation in Cities: Why, Where and When Does it Matter?”, *Urban Studies*, 37(3): 533–555.
- Dutt, P., Mihov, I. and Van Zandt, T. (2013), “The Effect of WTO on the Extensive and the Intensive Margins of Trade”, *Journal of International Economics*, 91(2): 204–219.
- Eaton, J., Eslava, M., Jinkins, D., Krizan, C.J. and Tybout, J.R. (2021), “A Search and Learning Model of Export Dynamics”, NBER Working Paper No. 29100, Cambridge (MA): National Bureau of Economic Research (NBER).
- Ebenstein, A., Harrison, A., McMillan, M. and Phillips, S. (2014), “Estimating the Impact of Trade and Offshoring on American Workers Using the Current Population Surveys”, *The Review of Economics and Statistics*, 96(4): 581–595.
- The Economist (2013), “The Humble Hero”, 18 May 2013.
- The Economist (2015), “Why Singapore Became An Economic Success”, 26 March 2015.
- Edmonds, E.V. and Pavcnik, N. (2004), “The Effect of Trade Liberalization on Child Labor”, *Journal of International Economics*, 65: 401–419.
- Edwards, K.A. (2020), “Sitting It Out? Or Pushed Out? Women Are Leaving the Labor Force in Record Numbers”, Santa Monica (CA): RAND Corporation.
- Edwards, L., Ismail, Z., Kamutando, G., Mambara, S., Stern, M. and Venter, F. (2022), “The consumer price effects of specific trade policy restrictions in South Africa”, SARB Working Paper Series No. WP/22/15, Pretoria: South African Reserve Bank (SARB).
- Egger, P.H., Nigai, S. and Strecker, N.M. (2019), “The Taxing Deed of Globalization”, *American Economic Review*, 109(2): 353–390.
- Eppinger, P., Felbermayr, G.J., Krebs, O. and Kukharsky, B. (2021), “Decoupling Global Value Chains”, CESifo Working Paper No. 9079,

- Munich: Center for Economic Studies and Institute for Economic Research (CESifo).
- Ernst, H., Guderian, C.C. and Richter, M. (2022), "The Innovation Environment and Knowledge Diffusion: Improving Policy Decisions through Patent Analytics", in Taubman, A. and Watal, J. (eds.). *Trade in Knowledge: Intellectual Property, Trade and Development in a Transformed Global Economy*, Cambridge (UK): Cambridge University Press.
- Erten, B. and Leight, J. (2021), "Exporting Out of Agriculture: The Impact of WTO Accession on Structural Transformation in China", *The Review of Economics and Statistics*, 103(2): 364–380.
- Erten, B., Leight, J. and Tregenna, F. (2019), "Trade Liberalization and Local Labor Market Adjustment in South Africa", *Journal of International Economics*, 118: 448–467.
- Erumban, A.A. and de Vries, G.J. (2021), "Industrialization in Developing Countries: Is It Related to Poverty Reduction?", WIDER Working Paper No. 2021/172, Helsinki: United Nations University World Institute for Development Economics Research (UNU-WIDER).
- Eslava, M., Haltiwanger, J., Kugler, A. and Kugler, M. (2013), "Trade and Market Selection: Evidence from Manufacturing Plants in Colombia", *Review of Economic Dynamics*, 16(1): 135–158.
- European Investment Bank (EIB) (2024), *Investment Report 2023/2024: Transforming for Competitiveness*, Luxembourg: EIB.
- Eurostat (2013), *Rural development statistics by urban-rural typology*, Luxembourg: Eurostat.
- Eurostat (2023), *International Trade in Goods by Enterprise Size*, Luxembourg: Eurostat.
- Fajgelbaum, P.D. and Khandelwal, A.K. (2016), "Measuring the Unequal Gains from Trade", *The Quarterly Journal of Economics*, 131(3): 1113–1180.
- Fajgelbaum, P.D. and Khandelwal, A.K. (2024), "The Value of De Minimis Imports", NBER Working Paper No. 32607, Cambridge (MA): National Bureau of Economic Research (NBER).
- Fajgelbaum, P.D. and Redding, S.J. (2022), "Trade, Structural Transformation, and Development: Evidence from Argentina 1869–1914", *Journal of Political Economy*, 130(5): 1249–1318.
- Fajgelbaum, P.D., Goldberg, P.K., Kennedy, P., Khandelwal, A.K. and Taglioni, D. (2021), "The US-China Trade War and Global Reallocations", NBER Working Paper No. 29562, Cambridge (MA): National Bureau of Economic Research (NBER).
- Fajgelbaum, P.D., Goldberg, P.K., Kennedy, P.J. and Khandelwal, A.K. (2020), "The Return to Protectionism", *The Quarterly Journal of Economics*, 135(1): 1–55.
- Fan, H., Lin, F. and Lin, S. (2020), "The Hidden Cost of Trade Liberalization: Input Tariff Shocks and Worker Health in China", *Journal of International Economics*, 126: 103349.
- Fariñas, J.C. and Martín-Marco, A. (2007), "Exporting and Economic Performance: Firm-level Evidence of Spanish Manufacturing", *The World Economy*, 30(4): 618–646.
- Farole, T. (2011), *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences*, Washington, D.C.: World Bank.
- Farole, T. and Moberg, L. (2017), "Special Economic Zones in Africa: Political Economy Challenges and Solutions", in Page, J. and Tarp, F. (eds.). *The Practice of Industrial Policy*, Oxford (UK): Oxford University Press.
- Farooq, A., Kugler, A.D. and Muratori, U. (2020), "Do Unemployment Insurance Benefits Improve Match and Employer Quality? Evidence from Recent U.S. Recessions", NBER Working Paper No. 27574, Cambridge (MA): National Bureau of Economic Research (NBER).
- Farrokhi, F. and Pellegrina, H.S. (2023), "Trade, Technology, and Agricultural Productivity", *Journal of Political Economy*, 131(9): 2509–2555.
- Farrokhi, F., Lashkaripour, A. and Pellegrina, H.S. (2024), "Trade and Technology Adoption in Distorted Economies", *Journal of International Economics*, 150: 103922.
- Federal Statistical Office of Germany (2024), "Abstand Zwischen Gering- Und Besserverdienenden Wird Kleiner", Wiesbaden: Federal Statistical Office of Germany (Statistisches Bundesamt).
- Feenstra, R.C. and Hanson, G.H. (1996), "Foreign Investment, Outsourcing and Relative Wages", in Feenstra, R. C., Grossman, G. M., and Irwin, D. (eds.). *Political Economy of Trade Policy: Essays in Honor of Jagdish Bhagwati*, Cambridge (MA): MIT Press.
- Feenstra, R.C. and Sasahara, A. (2018), "The 'China Shock,' Exports and U.S. Employment: A Global Input-Output Analysis", *Review of International Economics*, 26(5): 1053–1083.
- Felbermayr, G., Prat, J. and Schmerer, H.-J. (2011), "Trade and Unemployment: What Do the Data Say?", *European Economic Review*, 55(6): 741–758.
- Felix, M. (2022), "Trade, Labor Market Concentration, and Wages", Unpublished Manuscript, New Haven (CT): Yale University.
- Fernandes, A.M. (2007), "Trade Policy, Trade Volumes and Plant-level Productivity in Colombian Manufacturing Industries", *Journal of International Economics*, 71(1): 52–71.
- Fernandes, A.M., Lefebvre, K. and Rocha, N. (2021), "Heterogeneous Impacts of SPS and TBT Regulations: Firm-Level Evidence from Deep Trade Agreements", Policy Research Working Paper No. 9700, Washington, D.C.: World Bank.
- Fernandes, A.M., Rocha, N. and Ruta, M. (eds.) (2023), *Beyond Trade: How Deep Trade Agreements Shape Non-Trade Outcomes*. London (UK): CEPR Press.
- Ferriere, A., Navarro, G. and Reyes-Heroles, R. (2023), "Escaping the Losses from Trade: The Impact of Heterogeneity and Skill Acquisition", Unpublished Manuscript, Washington D.C.: Federal Reserve Board (FED).
- Feyrer, J. (2019), "Trade and Income—Exploiting Time Series in Geography", *American Economic Journal: Applied Economics*, 11(4): 1–35.
- Feyrer, J. (2021), "Distance, Trade, and Income - The 1967 to 1975 Closing of the Suez Canal as a Natural Experiment", *Journal of Development Economics*, 153: 102708.
- Fieler, A.C., Eslava, M. and Xu, D.Y. (2018), "Trade, Quality Upgrading, and Input Linkages: Theory and Evidence from Colombia", *American Economic Review*, 108(1): 109–146.
- Finan, F., Olken, B.A. and Pande, R. (2017), "The Personnel Economics of the Developing State", in Banerjee, A. V. and Duflo, E. (eds.). *Handbook of Economic Field Experiments*, Amsterdam: North-Holland.
- Finlay, R.J. (2024), "Financial Frictions, Exporters, and International Trade", Unpublished Manuscript, New Haven (CT): Yale University.
- Flaaen, A. and Pierce, J. (2019), "Disentangling the Effects of the 2018–2019 Tariffs on a Globally Connected U.S. Manufacturing Sector", Finance and Economics Discussion Series No. 2019-086, Washington, D.C.: Board of Governors of the Federal Reserve System.
- Flaaen, A., Hortaçsu, A. and Tintelnot, F. (2020), "The Production Relocation and Price Effects of US Trade Policy: The Case of Washing Machines", *American Economic Review*, 110(7): 2103–2127.
- Fliess, B., Idsardi, E. and Rossouw, R. (2017), "Export Controls and Competitiveness in African Mining and Minerals Processing Industries", OECD Trade Policy Paper No. 204, Paris: Organization for Economic Cooperation and Development (OECD).
- Foley, C.F. and Manova, K. (2015), "International Trade, Multinational Activity, and Corporate Finance", *Annual Review of Economics*, 7(1): 119–146.
- Fontagné, L., Orefice, G. and Piermartini, R. (2020), "Making Small Firms Happy? The Heterogeneous Effect of Trade Facilitation Measures", *Review of International Economics*, 28(3): 565–598.
- Fontagné, L., Rocha, N., Ruta, M. and Santoni, G. (2023), "The Economic Impact of Deepening Trade Agreements", *World Bank Economic Review*, 37: 366–388.
- Food and Agriculture Organization of the United Nations (FAO) (2022), *The Cotton-4 (C-4) Countries in the Context of the Global Cotton Market: Situation and Short- and Medium-Term Outlook*, Rome: FAO.

- Francois, J., Hoekman, B.M., Manchin, M. and Santi, F. (2022), "Pursuing Environmental and Social Objectives Through Trade Agreements", WTI Working Paper No. 08/2022, Bern: World Trade Institute (WTI).
- Freund, C. and Moran, T. (2017), "Multinational Investors as Export Superstars: How Emerging-Market Governments Can Reshape Comparative Advantage", Working Paper No. 17-1, Washington, D.C.: Peterson Institute for International Economics (PIIE).
- Freund, C. and Ornelas, E. (2010), "Regional Trade Agreements", *Annual Review of Economics*, 2: 139–167.
- Freund, C. and Pierola, M.D. (2015), "Export Superstars", *The Review of Economics and Statistics*, 97(5): 1023–1032.
- Freund, C. and Pierola, M.D. (2020), "The Origins and Dynamics of Export Superstars", *The World Bank Economic Review*, 34(1): 28–47.
- Freund, C. and Rocha, N. (2011), "What Constrains Africa's Exports?", *The World Bank Economic Review*, 25(3): 361–386.
- Freund, C. and Weinhold, D. (2002), "The Internet and International Trade in Services", *American Economic Review*, 92(2): 236–240.
- Freund, C. and Weinhold, D. (2004), "The Effect of the Internet on International Trade", *Journal of International Economics*, 62(1): 171–189.
- Furman, J., Russ, K. and Shambaugh, J. (2017), "US Tariffs Are an Arbitrary and Regressive Tax", London (UK): CEPR.
- Gagliardi, L., Moretti, E. and Serafinelli, M. (2023), "The World's Rust Belts: The Heterogeneous Effects of Deindustrialization on 1,993 Cities in Six Countries", NBER Working Paper No. 31948, Cambridge (MA): National Bureau of Economic Research (NBER).
- Gailes, A., Gurevich, T., Shikher, S. and Tsigas, M. (2018), "Gender and Income Inequality in United States Tariff Burden", Economics Working Paper Series No. 2018-08-B, Washington, D.C.: United States International Trade Commission (USITC).
- Garcia Marin, A., Potlogea, A.V., Voigtländer, N. and Yang, Y. (2020), "Cities, Productivity, and Trade", NBER Working Paper No. 28309, Cambridge (MA): National Bureau of Economic Research (NBER).
- Garg, S., Mahajan, N. and Ghosh, J. (2022), "Artificial Intelligence as an Emerging Technology in Global Trade: The Challenges and Possibilities", in Vikas, G. and Goel, R. (eds.). *Research Anthology on Macroeconomics and the Achievement of Global Stability*, Hershey (PA): IGI Global.
- Gereffi, G., Humphrey, J. and Sturgeon, T. (2005), "The Governance of Global Value Chains", *Review of International Political Economy*, 12(1): 78–104.
- Gervais, A. and Jensen, J.B. (2019), "The Tradability of Services: Geographic Concentration and Trade Costs", *Journal of International Economics*, 118: 331–350.
- Gill, I.S. and Kharas, H. (eds.) (2007), *An East Asian Renaissance: Ideas for Economic Growth*. The World Bank.
- Giordani, P.E., Rocha, N. and Ruta, M. (2016), "Food Prices and the Multiplier Effect of Trade Policy", *Journal of International Economics*, 101: 102–122.
- Glauber, J. and Laborde, D. (2022), "How Will Russia's Invasion of Ukraine Affect Global Food Security?", Washington, D.C.: International Food Policy Research Institute (IFPRI).
- Global Affairs Canada (2023), *Canada's State of Trade 2023: Inclusive Trade*, Ottawa: Global Affairs Canada.
- Goes, C. and Bekkers, E. (2022), "The Impact of Geopolitical Conflicts on Trade, Growth, and Innovation", Staff Working Paper No. ERSD-2022-09, Geneva: World Trade Organization (WTO).
- Goff, P. (2021), "Inclusive Trade: Justice, Innovation, or More of the Same?", *Ethics & International Affairs*, 35(2): 273–301.
- Goldberg, P.K. and Pavcnik, N. (2007), "Distributional Effects of Globalization in Developing Countries", *Journal of Economic Literature*, 45(1): 39–82.
- Goldberg, P.K. and Reed, T. (2023a), "Is the Global Economy Deglobalizing? And If So, Why? And What Is Next?", NBER Working Paper No. 31115, Cambridge (MA): National Bureau of Economic Research (NBER).
- Goldberg, P.K. and Reed, T. (2023b), "Presidential Address: Demand-Side Constraints in Development. The Role of Market Size, Trade, and (In)Equality", *Econometrica*, 91(6): 1915–1950.
- Goldberg, P.K., Khandelwal, A.K., Pavcnik, N. and Topalova, P. (2010), "Imported Intermediate Inputs and Domestic Product Growth: Evidence from India", *The Quarterly Journal of Economics*, 125(4): 1727–1767.
- Goldman Sachs (2023), *Global Economics Analyst: The Path to 2025 — Capital Market Size and Opportunity*, New York: Goldman Sachs.
- Gollin, D. and Kaboski, J. (2023), "New Views Of Structural Transformation: Insights From Recent Literature", NBER Working Paper No. 31905, Cambridge (MA): National Bureau of Economic Research (NBER).
- Gonzalez-Garcia, J.R. and Yang, Y. (2020), "International Trade and Corporate Market Power", IMF Working Paper No. 2020/131, Washington, D.C.: International Monetary Fund (IMF).
- Gopinath, G. and Neiman, B. (2014), "Trade Adjustment and Productivity in Large Crises", *American Economic Review*, 104(3): 793–831.
- Gorodnichenko, Y., Svejnar, J. and Terrell, K. (2010), "Globalization and Innovation in Emerging Markets", *American Economic Journal: Macroeconomics*, 2(2): 194–226.
- Goutam, P., Gutierrez, I.A., Kumar, K.B. and Nataraj, S. (2017), "Does Informal Employment Respond to Growth Opportunities?: Trade-Based Evidence from Bangladesh", RAND Working Paper No. WR-1198, Santa Monica (CA): RAND Corporation.
- Greenland, A., Lake, J. and Lopresti, J. (2024), "US Inequality in the 1980s: The Tokyo Round Trade Liberalization and the Swiss Formula", CESifo Working Paper No. 10983, Munich: Center for Economic Studies and Institute for Economic Research (CESifo).
- Greig, J. and Nelson, H. (2022), "Shifting Perspectives: How COVID-19 and In-Home Information and Communication Technology Impacted U.S. Residential Internet Perceptions", *Journal of Information Policy*, 12: 128–164.
- Grossman, G.M. and Rossi-Hansberg, E. (2008), "Trading Tasks: A Simple Theory of Offshoring", *American Economic Review*, 98(5): 1978–1997.
- Grundke, R. and Arnold, J.M. (2022), "Mastering the Transition: A Synthetic Literature Review of Trade Adaptation Policies", OECD Economics Department Working Papers No. 1719, Paris: Organisation for Economic Co-operation and Development (OECD).
- Guillouet, L., Khandelwal, A., Macchiavello, R., Malhotra, M. and Teachout, M. (2024), "Language Barriers in Multinationals and Knowledge Transfers", NBER Working Paper No. 28807, Cambridge (MA): National Bureau of Economic Research (NBER).
- Hakobyan, S. and McLaren, J. (2016), "Looking for Local Labor Market Effects of NAFTA", *The Review of Economics and Statistics*, 98(4): 728–741.
- Hallaert, J.-J., Cepeda, R.C. and Kang, G. (2011), "Estimating the Constraints to Trade of Developing Countries", OECD Trade Policy Working Paper No. 116, Paris: Organisation for Economic Co-operation and Development (OECD).
- Halpern, L., Koren, M. and Szeidl, A. (2015), "Imported inputs and productivity", *American Economic Review*, 105(12): 3660–3703.
- Haltiwanger, J., Scarpetta, S. and Schweiger, H. (2014), "Cross Country Differences in Job Reallocation: The Role of Industry, Firm Size and Regulations", *Labour Economics*, 26: 11–25.
- Han, J., Liu, R., Ural Marchand, B. and Zhang, J. (2016), "Market Structure, Imperfect Tariff Pass-Through, and Household Welfare In Urban China", *Journal of International Economics*, 100: 220–232.
- Handley, K. and Limão, N. (2017), "Policy Uncertainty, Trade, and Welfare: Theory and Evidence for China and the United States", *American Economic Review*, 107(9): 2731–2783.
- Handley, K. and Limão, N. (2022), "Trade Policy Uncertainty", *Annual Review of Economics*, 14(1): 363–395.
- Handley, K., Kamal, F. and Monarch, R. (2024), "Rising Import Tariffs, Falling Exports: When Modern Supply Chains Meet Old-Style Protectionism", *American Economic Journal: Applied Economics*, Forthcoming.

- Handley, K., Limão, N., Ludema, R. and Yu, Z. (2024), "Firm Input Choice Under Trade Policy Uncertainty", *Journal of International Economics*, 150: 103909.
- Hansman, C., Hjort, J., León-Ciliotta, G. and Teachout, M. (2020), "Vertical Integration, Supplier Behavior, and Quality Upgrading among Exporters", *Journal of Political Economy*, 128(9): 3570–3625.
- Hanson, G.H., Lind, N. and Muendler, M.-A. (2015), "The Dynamics of Comparative Advantage", NBER Working Paper No. 21753, Cambridge (MA): National Bureau of Economic Research (NBER).
- Harrison, A., Rodríguez-Clare, A., Chenery, H. and Srinivasan, T.N. (2010), "Trade, Foreign Investment, and Industrial Policy for Developing Countries", in Rodrik, D. and Rosenzweig, M. (eds.). *Handbook of Development Economics*, Amsterdam: Elsevier.
- Hausmann, R. and Rodrik, D. (2003), "Economic Development as Self-Discovery", *Journal of Development Economics*, 72(2): 603–633.
- Hausmann, R., Hwang, J. and Rodrik, D. (2007), "What You Export Matters", *Journal of Economic Growth*, 12(1): 1–25.
- Helblich, S., Nagy, D.K., Trew, A. and Zylberberg, Y. (2023), "The Death and Life of Great British Cities", BSE Working Paper No. 1398, Barcelona: Barcelona School of Economics (BSE).
- Helliwell, J.F. and Huang, H. (2014), "New Measures of the Costs of Unemployment: Evidence from the Subjective Well-Being of 3.3 Million Americans", *Economic Inquiry*, 52(4): 1485–1502.
- Helm, I. (2020), "National Industry Trade Shocks, Local Labour Markets, and Agglomeration Spillovers", *The Review of Economic Studies*, 87(3): 1399–1431.
- Helpman, E., Itskhoki, O., Muendler, M.-A. and Redding, S.J. (2016), "Trade and Inequality: From Theory to Estimation", *The Review of Economic Studies*, 84(1): 357–405.
- Herman, P.R. and Oliver, S. (2023), "Trade, Policy, and Economic Development in the Digital Economy", *Journal of Development Economics*, 164: 103135.
- Herrendorf, B., Rogerson, R. and Valentinyi, Á. (2014), "Growth and Structural Transformation", in Aghion, P. and Durlauf, S. (eds.). *Handbook of Economic Growth*, Amsterdam: Elsevier.
- Herrendorf, B., Rogerson, R. and Valentinyi, Á. (2022), "New Evidence on Sectoral Labor Productivity: Implications for Industrialization and Development", NBER Working Paper No. 29834, Cambridge (MA): National Bureau of Economic Research (NBER).
- Hidalgo, C.A., Klinger, B., Barabási, A.-L. and Hausmann, R. (2007), "The Product Space Conditions the Development of Nations", *Science*, 317(5837): 482–487.
- Hjort, J. and Poulsen, J. (2019), "The Arrival of Fast Internet and Employment in Africa", *American Economic Review*, 109(3): 1032–1079.
- Hoda, A. (2021), "WTO Reform: Issues in Special and Differential Treatment (S&DT)", ICRIER Working Paper No. 406, New Delhi: Indian Council for Research on International Economic Relations (ICRIER).
- Hoekman, B.M. and Shepherd, B. (2013), "Who Profits from Trade Facilitation Initiatives?", ARTNeT Working Paper Series No. 129, Bangkok: Asia-Pacific Research and Training Network on Trade (ARTNeT).
- Hoekman, B.M. and Shepherd, B. (2015), "Services Productivity, Trade Policy, and Manufacturing Exports", EUI Working Paper RSCAS No. 2015/07, Fiesole: European University Institute (EUI).
- Hoekman, B.M. and Shingal, A. (2024), "Development Goals, Commercial Interest and EU Aid-for-Trade", *World Development*, 173: 106389.
- Hoekman, B.M., Santi, F. and Shingal, A. (2023), "Trade Effects of Non-Economic Provisions in Trade Agreements", *Economics Letters*, 226: 111081.
- Hufbauer, G.C. and Hogan, M. (2023), "America's Payoff From Engaging in World Markets Since 1950 Was Almost \$2.6 Trillion in 2022", Policy Brief No. 23-17, Washington, D.C.: Peterson Institute for International Economics (PIIE).
- Hummels, D., Munch, J. and Xiang, C. (2018), "Offshoring and Labor Markets", *Journal of Economic Literature*, 56(3): 981–1028.
- Huntington, S.P. (1996), *The Clash of Civilizations and the Remaking of World Order*. New York: Simon & Schuster.
- Hyman, B., Kovak, B. and Leive, A. (2024), "Wage Insurance for Displaced Workers", FRBNY Staff Report No. 1105, New York: Federal Reserve Bank of New York (FRBNY).
- Iacovone, L., Rauch, F. and Winters, L.A. (2013), "Trade as an Engine of Creative Destruction: Mexican Experience with Chinese Competition", *Journal of International Economics*, 89(2): 379–392.
- Ianchovichina, E. and Martin, W. (2001), "Trade Liberalization in China's Accession to WTO", *Journal of Economic Integration*, 16(4): 421–445.
- Impullitti, G. and Kazmi, S. (2022), "Globalization and Market Power", CEP Discussion Paper No. 1866, London (UK): Centre for Economic Performance (CEP).
- International Cotton Advisory Committee (ICAC) (2023), *Production and Trade Subsidies Affecting the Cotton Industry*, Washington, D.C.: ICAC.
- International Energy Agency (IEA) (2022), *Africa Energy Outlook 2022*, Paris: IEA.
- International Energy Agency (IEA) (2023), *Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach*, Paris: IEA.
- International Finance Corporation (IFC) (2021), *Women and E-commerce in Southeast Asia*, Washington, D.C.: IFC.
- International Finance Corporation (IFC) and World Trade Organization (WTO) (2023), *Trade Finance in the Mekong Region: A Study of Cambodia, the Lao People's Democratic Republic and Viet Nam*, Washington, D.C. and Geneva: IFC and WTO.
- International Finance Corporation (IFC) and World Trade Organization (WTO) (2022), *Trade Finance in West Africa: A Study of Côte d'Ivoire, Ghana, Nigeria, and Senegal*, Washington, D.C. and Geneva: IFC and WTO.
- International Labour Organization (ILO) (2016), *Assessment of Labour Provisions in Trade and Investment Agreements*, Geneva: ILO.
- International Labour Organization (ILO) (2019), *Economic Diversification of the Rural Economy*, Geneva: ILO.
- International Labour Organization (ILO) (2021a), *Changing Demand for Skills in Digital Economies and Societies: Literature Review and Case Studies from Low- and Middle-Income Countries*, Geneva: ILO.
- International Labour Organization (ILO) (2021b), *World Employment and Social Outlook 2021*, Geneva: ILO.
- International Labour Organization (ILO) (2023), *Women and Men in the Informal Economy: a Statistical Update*, Geneva: ILO.
- International Monetary Fund (IMF) (2011), *Managing Global Growth Risks and Commodity Price Shocks - Vulnerabilities and Policy Challenges for Low-Income Countries*, Washington, D.C.: IMF.
- International Monetary Fund (IMF) (2019), *World Economic Outlook, October 2019: Global Manufacturing Downturn, Rising Trade Barriers*, Washington, D.C.: IMF.
- International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD), World Bank and World Trade Organization (WTO) (2023), *Digital Trade for Development*, Geneva: WTO.
- International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), World Bank and World Trade Organization (WTO) (2022), *Subsidies, Trade, and International Cooperation*, Washington, D.C.: IMF.
- International Telecommunication Union (ITU) (2019), *Measuring Digital Development Facts and Figures 2019*, Geneva: ITU.
- International Telecommunication Union (ITU) (2023a), "Digital inclusion of all", ITU Backgrounders, Geneva (CH): ITU.
- International Telecommunication Union (ITU) (2023b), *Measuring Digital Development Facts and Figures 2023*, Geneva: ITU.
- International Trade Centre (ITC) (2015), *Unlocking Markets for Women to Trade*, Geneva: ITC.
- International Trade Centre (ITC) (2016), *SME Competitiveness Outlook 2016: Meeting the Standard for Trade*, Geneva: ITC.

- International Trade Centre (ITC) (2023), *SME Competitiveness Outlook 2023 Small Businesses in Fragility: from Survival to Growth*, Geneva: ITC.
- International Trade Centre (ITC), United Nations Network of Experts for Paperless Trade and Transport in Asia and the Pacific (UNNEXt) and United Nations Economic and Social Commission for Asia and the Pacific (United Nations ESCAP) (2016), *Making the WTO Trade Facilitation Agreement Work for SMEs: Mainstreaming Trade Facilitation in SME Development Strategies*, Bangkok: United Nations ESCAP.
- Irwin, D.A. (1998), "The Smoot-Hawley Tariff: A Quantitative Assessment", *Review of Economics and Statistics*, 80(2): 326–334.
- Irwin, D.A. (2024), "Does Trade Reform Promote Economic Growth? A Review of Recent Evidence", *The World Bank Research Observer*, lkae003.
- Islam, S.N. and Winkel, J. (2017), "Climate Change and Social Inequality", UNDESA Working Paper No. 152, New York: United Nations (UN).
- Ivus, O. (2010), "Do Stronger Patent Rights Raise High-Tech Exports to the Developing World?", *Journal of International Economics*, 81(1): 38–47.
- Jaccard, T.S. (2023), "Import Demand in Differentiated Products", Unpublished Manuscript, Hanover (NH): Dartmouth College.
- Jakubik, A. and Piermartini, R. (2023), "How WTO Commitments Tame Uncertainty", *European Economic Review*, 157: 104495.
- Janse van Rensburg, C., Bezuidenhout, C., Mathee, M. and Stolzenburg, V. (2020), "Globalization and Gender Inequality: Evidence from South Africa", WIDER Working Paper No. 2020/97, Helsinki: United Nations University World Institute for Development Economics Research (UNU-WIDER).
- Jensen, R. (2007), "The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector", *The Quarterly Journal of Economics*, 122(3): 879–924.
- Jensen, R. (2012), "Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India", *The Quarterly Journal of Economics*, 127(2): 753–792.
- Jerez, M.M. (2021), "Challenges and Opportunities for Indigenous Peoples' Sustainability", UNDESA Policy Briefs No. 101, New York: United Nations (UN).
- Juhász, R. and Steinwender, C. (2018), "Spinning the Web: The Impact of ICT on Trade in Intermediates and Technology Diffusion", NBER Working Paper No. 24590, Cambridge (MA): National Bureau of Economic Research (NBER).
- Juhász, R. and Steinwender, C. (2023), "Industrial Policy and the Great Divergence", NBER Working Paper No. 31736, Cambridge (MA): National Bureau of Economic Research (NBER).
- Juhász, R., Lane, N. and Rodrik, D. (2023), "The New Economics of Industrial Policy", NBER Working Paper No. 31538, Cambridge (MA): National Bureau of Economic Research (NBER).
- Kambourov, G. (2009), "Labour Market Regulations and the Sectoral Reallocation of Workers: The Case of Trade Reforms", *Review of Economic Studies*, 76(4): 1321–1358.
- Karabarbounis, L. (2024), "Perspectives on the Labor Share", *Journal of Economic Perspectives*, 38(2): 107–136.
- Kasahara, H. and Rodrigue, J. (2008), "Does the Use of Imported Intermediates Increase Productivity? Plant-level Evidence", *Journal of Development Economics*, 87(1): 106–118.
- Katz, L.F. and Autor, D.H. (1999), "Changes in the Wage Structure and Earnings Inequality", in Ashenfelter, O. and Card, D. (eds.). *Handbook of Labor Economics*, Volume 3, Amsterdam: Elsevier.
- Kerner, R. and Kitsing, M. (2023), "Small Is Beautiful and Important: Economies and Firms Trading in Digital Services", *Journal of Business Economics and Management*, 24(1): 93–111.
- Keskinen, P., Winschiers-Theophilus, H., Chivuno-Kuria, S., Müller, A. and Nieminen, M. (2022), "Digital Microwork as a Livelihood Strategy in a Namibian Informal Settlement", *The Electronic Journal of Information Systems in Developing Countries*, 88(1): e12197.
- Khan, L.M. (2017), "Amazon's Antitrust Paradox", *The Yale Law Journal*, 126(3): 710–805.
- Khandelwal, A.K., Schott, P.K. and Wei, S.-J. (2013), "Trade Liberalization and Embedded Institutional Reform: Evidence from Chinese Exporters", *American Economic Review*, 103(6): 2169–2195.
- Kim, P. (2019), "Big Data and Artificial Intelligence: New Challenges for Workplace Equality", *University of Louisville Law Review*, 57(2): 313–328.
- Kim, R. and Vogel, J. (2021), "Trade Shocks and Labor Market Adjustment", *American Economic Review: Insights*, 3(1): 115–130.
- Kinfemichael, B. and Morshed, A.K.M.M. (2019), "Unconditional Convergence of Labor Productivity in the Service Sector", *Journal of Macroeconomics*, 59: 217–229.
- Kis-Katos, K. and Sparrow, R. (2015), "Poverty, Labor Markets and Trade Liberalization in Indonesia", *Journal of Development Economics*, 117: 94–106.
- Kohn, D., Leibovici, F. and Szkup, M. (2016), "Financial Frictions and New Exporter Dynamics", *International Economic Review*, 57(2): 453–486.
- Korinek, A. and Stiglitz, J. (2021), "Artificial Intelligence, Globalization, and Strategies for Economic Development", NBER Working Paper No. 28453, Cambridge (MA): National Bureau of Economic Research (NBER).
- Korinek, J., Moïsé, E. and Tange, J. (2021), "Trade and Gender: A Framework of Analysis", OECD Trade Policy Paper No. 246, Paris: Organization for Economic Cooperation and Development (OECD).
- Kotz, M., Levermann, A. and Wenz, L. (2024), "The Economic Commitment of Climate Change", *Nature*, 628(8008): 551–557.
- Kovak, B.K. (2013), "Regional Effects of Trade Reform: What Is the Correct Measure of Liberalization?", *American Economic Review*, 103(5): 1960–1976.
- Kpodar, K. and Imam, P.A. (2024), "How Do Transaction Costs Influence Remittances?", *World Development*, 177: 106537.
- Kremer, M., Willis, J. and You, Y. (2022), "Converging to Convergence", *NBER Macroeconomics Annual*, 36: 337–412.
- Krugman, P., Obstfeld, M. and Melitz, M. (2014), *International Economics: Theory and Policy*. Upper Saddle River (NJ): Prentice Hall.
- Kurer, T. (2020), "The Declining Middle: Occupational Change, Social Status, and the Populist Right", *Comparative Political Studies*, 53(10–11): 1798–1835.
- Laajaj, R., Eslava, M. and Kinda, T. (2023), "The Costs of Bureaucracy and Corruption at Customs: Evidence from the Computerization of Imports in Colombia", *Journal of Public Economics*, 225: 104969.
- Lakner, C. and Milanovic, B. (2013), "Global Income Distribution : From the Fall of the Berlin Wall to the Great Recession", Policy Research Working Paper No. 6719, Washington, D.C.: World Bank.
- Lanteri, A., Medina, P. and Tan, E. (2023), "Capital-Reallocation Frictions and Trade Shocks", *American Economic Journal: Macroeconomics*, 15(2): 190–228.
- Larch, M., Monteiro, J.-A., Piermartini, R. and Yotov, Y.V. (2024), "On the Effects of GATT/WTO Membership on Trade: They Are Positive and Large after All", *Canadian Journal of Economics / Revue Canadienne d'Economique*, Forthcoming.
- Latina, J., Piermartini, R. and Ruta, M. (2011), "Natural Resources and Non-Cooperative Trade Policy", Staff Working Paper No. ERSD-2011-06, Geneva: World Trade Organization (WTO).
- Lee, W. and Cunha, B. (2024), *Maximizing Gains from Regional Trade Agreements in Central America*, Washington, D.C.: World Bank.
- Lee, Y. and Oh, J. (2022), "Is Aid-for-Trade Working? Evidence from Southeast Asian Countries", *Asia Pacific Management Review*, 27(2): 137–144.
- Leibovici, F. (2021), "Financial Development and International Trade", *Journal of Political Economy*, 129(12): 3405–3446.
- Leone, F., Macchiavello, R. and Reed, T. (2021), "The Falling Price of Cement in Africa", Policy Research Working Paper No. 9706, Washington, D.C.: World Bank.

- Li, Y. and Wilson, J.S. (2009), "Trade Facilitation and Expediting the Benefits of Trade: Evidence from Firm Level Data", ARTNet Working Paper Series No. 71, Bangkok: Asia-Pacific Research and Training Network on Trade (ARTNet).
- Lin, J. and Chang, H. (2009), "Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy it? A Debate Between Justin Lin and Ha-Joon Chang", *Development Policy Review*, 27(5): 483–502.
- Linarelo, A. (2018), "Direct and Indirect Effects of Trade Liberalization: Evidence from Chile", *Journal of Development Economics*, 134: 160–175.
- López, A. and García, P. (2020), *La Inversión Extranjera Directa: Definiciones, Determinantes, Impactos y Políticas Públicas*, Washington, D.C.: Inter-American Development Bank (IADB).
- López-González, J., Sorescu, S. and Kaynak, P. (2023), "Of Bytes and Trade: Quantifying the Impact of Digitalisation on Trade", OECD Trade Policy Paper No. 273, Paris: Organization for Economic Cooperation and Development (OECD).
- Lu, Y. and Yu, L. (2015), "Trade Liberalization and Markup Dispersion: Evidence from China's WTO Accession", *American Economic Journal: Applied Economics*, 7(4): 221–253.
- Lund, S., Manyika, J., Woetzel, J., Barriball, E., Krishnan, M., Alicke, K., Birshan, M., George, K., Smit, S., Swan, D. and Hutzler, K. (2020), *Risk, Resilience, and Rebalancing in Global Value Chains*, Washington, D.C.: McKinsey Global Institute.
- Ma, X. (2024), "College Expansion, Trade, and Innovation: Evidence from China", *International Economic Review*, 65(1): 315–351.
- Macchiavello, R. and Miquel-Florensa, J. (2019), "Buyer-Driven Upgrading in GVCs: The Sustainable Quality Program in Colombia", CEPR Discussion Papers No. DP13935, London (UK): Centre for Economic Policy Research (CEPR).
- Macchiavello, R. and Morjaria, A. (2015), "The Value of Relationships: Evidence from a Supply Shock to Kenyan Rose Exports", *American Economic Review*, 105(9): 2911–2945.
- Macheras, A.B. and Stanley, M. (2017), "Diversification and Specialization Across Urban Areas", *Federal Reserve Bank of Richmond Econ Focus*, Fourth Quarter: 36–39.
- Madanizadeh, S.A. (2021), "International Trade, Skill Premium and Endogenous Labor Division: The Case of Mexico", *Labour Economics*, 71: 102030.
- Maertens, M. and Swinnen, J.F.M. (2009), "Trade, Standards, and Poverty: Evidence from Senegal", *World Development*, 37(1): 161–178.
- Maggi, G. (1999), "The Role of Multilateral Institutions in International Trade Cooperation", *American Economic Review*, 89(1): 190–214.
- Maggi, G. and Rodriguez-Clare, A. (1998), "The Value of Trade Agreements in the Presence of Political Pressures", *Journal of Political Economy*, 106(3): 574–601.
- Mahbubani, K. (2013), *The Great Convergence: Asia, the West, and the Logic of One World*. New York: PublicAffairs.
- Malindini, K. (2022), "Reconfiguring Special Economic Zones for Sustainable Development and Inclusive Growth in Africa: A Theoretical Review", Working Paper Series on Charter Cities in Africa, Washington, D.C.: Charter Cities Institute.
- Manelici, I. and Pantea, S. (2021), "Industrial Policy at Work: Evidence from Romania's Income Tax Break for Workers in IT", *European Economic Review*, 133: 103674.
- Manova, K. (2013), "Credit Constraints, Heterogeneous Firms, and International Trade", *The Review of Economic Studies*, 80(2): 711–744.
- Manova, K., Wei, S.-J. and Zhang, Z. (2015), "Firm Exports and Multinational Activity Under Credit Constraints", *The Review of Economics and Statistics*, 97(3): 574–588.
- Mansfield, E.D. and Reinhardt, E. (2008), "International Institutions and the Volatility of International Trade", *International Organization*, 62(4): 621–652.
- Margalit, Y. (2012), "Lost in Globalization: International Economic Integration and the Sources of Popular Discontent", *International Studies Quarterly*, 56(3): 484–500.
- Marioli, F.A. and Vegh, C. (2023), "Fiscal Procyclicality in Commodity Exporting Countries: How Much Does it Pour and Why?", NBER Working Paper No. 31431, Cambridge (MA): National Bureau of Economic Research (NBER).
- Martinez, J.M. and Padilla, R. (2017), "Política Industrial y Cambio Estructural en Costa Rica", in Cimoli, M., Castillo, M., Porcile, G., and Stumpo, G. (eds.). *Políticas Industriales y Tecnológicas en América Latina*, Santiago: United Nations Economic Commission for Latin America and the Caribbean (ECLAC).
- Martins, P.S. and Opromolla, L.D. (2011), "Why Ex(Im)porters Pay More: Evidence from Matched Firm-Worker Panels", IZA Discussion Paper No. 6013, Bonn: Institute of Labor Economics (IZA).
- Maskus, K. (2000), *Intellectual Property Rights in the Global Economy*, Washington, D.C.: Institute for International Economics.
- Maskus, K.E. and Yang, L. (2018), "Domestic Patent Rights, Access to Technologies and the Structure of Exports", *Canadian Journal of Economics/Revue Canadienne d'Economie*, 51(2): 483–509.
- McCaig, B. (2011), "Exporting Out of Poverty: Provincial Poverty in Vietnam and U.S. Market Access", *Journal of International Economics*, 85(1): 102–113.
- McCaig, B. and McMillan, M. (2020), "Trade Liberalisation and Labour Market Adjustment in Botswana", *Journal of African Economies*, 29(3): 236–270.
- McCaig, B. and Pavcnik, N. (2013), "Moving out of Agriculture: Structural Change in Vietnam", NBER Working Paper No. 19616, Cambridge (MA): National Bureau of Economic Research (NBER).
- McCaig, B. and Pavcnik, N. (2018), "Export Markets and Labor Allocation in a Low-Income Country", *American Economic Review*, 108(7): 1899–1941.
- McCaig, B., Pavcnik, N. and Wong, W.F. (2023), "FDI Inflows and Domestic Firms: Adjustments to New Export Opportunities", NBER Working Paper No. 30729, Cambridge (MA): National Bureau of Economic Research (NBER).
- McCarthy, J. (2022), "A Bad Deal for Development: Assessing the Impacts of the New Inclusive Framework Tax Deal on Low- and Middle-Income Countries", Brookings Global Working Paper No. 174, Washington, D.C.: Brookings Center for Sustainable Development.
- McMillan, M., Welch, K.H., Rodrik, D., Elbadawi, I. and O'Connell, S. (2003), "When Economic Reform Goes Wrong: Cashew in Mozambique", *Brookings Trade Forum*, 97–165.
- Mendoza, A., Nayyar, G. and Piermartini, R. (2018) "Are the Poor Getting Globalized?" in *Trade and Poverty Reduction: New Evidence of Impacts in Developing Countries*, Washington, D.C. and Geneva: World Bank and World Trade Organization (WTO).
- Méndez, E. and Van Patten, D. (2022), "Multinationals, Monopsony, and Local Development: Evidence From the United Fruit Company", *Econometrica*, 90(6): 2685–2721.
- Menéndez González, I., Owen, E. and Walter, S. (2023), "Low-Skill Products by High-Skill Workers: The Distributive Effects of Trade in Emerging and Developing Countries", *Comparative Political Studies*, 56(11): 1631–1789.
- Mesquita, A., Oliveira, L. and Sequeira, A.S. (2021), "Did AI Kill My Job?: Impacts of the Fourth Industrial Revolution in Administrative Job Positions in Portugal", in Pelet, J.-É. (ed.). *Handbook of Research on User Experience in Web 2.0 Technologies and Its Impact on Universities and Businesses*, Hershey (PA): IGI Global.
- Métivier, J., Bacchetta, M., Bekkers, E. and Koopman, R. (2023), "International Trade Cooperation's Impact on the World Economy", *Journal of Policy Modeling*, 45(4): 713–744.
- Milanovic, B. (2006), "Global Income Inequality: What It Is And Why It Matters?", UNDESA Working Paper No. 26, New York: United Nations (UN).
- Milanovic, B. (2016), *Global Inequality: A New Approach for the Age of Globalization*. Cambridge (MA): Belknap Press.
- Milanovic, B. (2023), "The Great Convergence: Global Equality and Its Discontents", *Foreign Affairs*, July/August 2023.

- Milanovic, B. (2024), "The Three Eras of Global Inequality, 1820–2020 with the Focus on the Past Thirty Years", *World Development*, 177.
- Milner, H. (2021), "Voting for Populism in Europe: Globalization, Technological Change, and the Extreme Right", *Comparative Political Studies*, 54(13): 2286–2320.
- Mitchener, K.J., O'Rourke, K.H. and Wandschneider, K. (2022), "The Smoot-Hawley Trade War", *The Economic Journal*, 132(647): 2500–2533.
- Mobbs, P.M. (2011), "The Mineral Industry of Zambia", in *2009 Minerals Yearbook*, Washington, D.C.: U.S. Department of the Interior.
- Molla, R. (2023), "Tech Companies Are Finally Firing Tech Workers", Vox.com.
- Monga, C. (2017), "Industrialization: A Primer", in *Industrialize Africa: Strategies, Policies, Institutions, and Financing*, Abidjan: African Development Bank (AfDB).
- Monge-González, R. (2017), *Moving Up the Global Value Chain: The Case of Intel Costa Rica*, Lima: International Labour Organization (ILO) Regional Office for Latin America and the Caribbean.
- Monteiro, J.-A. (2016), "Provisions on Small and Medium-sized Enterprises in Regional Trade Agreements", Staff Working Paper No. ERSD-2016-12, Geneva: World Trade Organization (WTO).
- Monteiro, J.-A. (2021a), "Buena Vista: Social Corporate Responsibility Provisions in Regional Trade Agreements", Staff Working Paper No. ERSD-2021-11, Geneva: World Trade Organization (WTO).
- Monteiro, J.-A. (2021b), "Hold The Line: The Evolution of Telecommunications Provisions in Regional Trade Agreements", Staff Working Paper No. ERSD-2021-7, Geneva: World Trade Organization (WTO).
- Monteiro, J.-A. (2021c), "The Evolution of Gender-related Provisions in Regional Trade Agreements", Staff Working Paper No. ERSD-2021-8, Geneva: World Trade Organization (WTO).
- Monteiro, J.-A., Posada, K.C. and Tuthill, L. (2022), "Communication Break Down: Typology of Telecommunications Provisions in Regional Trade Agreements", Staff Working Paper No. ERSD-2022-02, Geneva: World Trade Organization (WTO).
- Mothobi, O. (2021), "Digital Labour in Africa: Opportunities and Challenges", Policy Brief No.1, Cape Town: Research ICT Africa.
- Munshi, K. and Rosenzweig, M. (2006), "Traditional Institutions Meet the Modern World: Caste, Gender, and Schooling Choice in a Globalizing Economy", *American Economic Review*, 96(4): 1225–1252.
- Munshi, K. and Rosenzweig, M. (2016), "Networks and Misallocation: Insurance, Migration, and the Rural-Urban Wage Gap", *American Economic Review*, 106(1): 46–98.
- Munshi, K. and Wilson, N. (2008), "Identity, Parochial Institutions, and Occupational Choice: Linking the Past to the Present in the American Midwest", NBER Working Paper No. 13717, Cambridge (MA): National Bureau of Economic Research (NBER).
- Muralidharan, K., Singh, A. and Ganimian, A.J. (2019), "Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India", *American Economic Review*, 109(4): 1426–1460.
- Naidu, S., Robinson, J.A. and Young, L.E. (2021), "Social Origins of Dictatorships: Elite Networks and Political Transitions in Haiti", *American Political Science Review*, 115(3): 900–916.
- Nano, E. and Stolzenburg, V. (2021), "The Role of Global Services Value Chains for Services-Led Development", in *GVC Development Report 2021: Beyond Production*, Manila, Philippines: Asian Development Bank (ADB).
- Nano, E., Nayar, G., Rubinová, S. and Stolzenburg, V. (2021), "The Impact of Services Liberalization on Education: Evidence from India", Staff Working Paper No. ERSD-2021-10, Geneva: World Trade Organization (WTO).
- Nathoo, R., Salim, R., Ancharaz, V. and Kabir, M. (2021), "Does Aid for Trade Diversify Sub-Saharan Africa's Exports at the Intensive and Extensive Margins?", *Applied Economics*, 53(55): 6412–6425.
- Nayyar, G., Cruz, M. and Zhu, L. (2021), "Does Premature Deindustrialization Matter? The Role of Manufacturing versus Services in Development", *Journal of Globalization and Development*, 12(1): 63–102.
- Nayyar, G., Hallward-Driemeier, M. and Davies, E. (2021), *At Your Service?: The Promise of Services-Led Development*, Washington, D.C.: World Bank.
- Nekoei, A. and Weber, A. (2017), "Does Extending Unemployment Benefits Improve Job Quality?", *American Economic Review*, 107(2): 527–561.
- Ngene, G. (2022), "Blanket Condemnation of Africa's Microwork Industry Could Hurt It More than Grow It: Unpacking A Recent Critique", Nairobi: Job Tech Alliance.
- Nicita, A. (2009), "The Price Effect of Tariff Liberalization: Measuring the Impact on Household Welfare", *Journal of Development Economics*, 89(1): 19–27.
- Nicita, A., Olarreaga, M. and Porto, G. (2014), "Pro-Poor Trade Policy in Sub-Saharan Africa", *Journal of International Economics*, 92(2): 252–265.
- Office of the United Nations High Commissioner for Human Rights (OHCHR) (2016), *Report of the Special Rapporteur on the rights of indigenous peoples*, Geneva: OHCHR.
- Ohmae, K. (1999), *The Borderless World: Power and Strategy in the Interlinked Economy*. Revised edition. New York: Harper Business.
- Ollarreaga, M., Piermartini, R. and Porto, G. (2020) "Industry Wages and Tariffs of the Rest of the World" in Bacchetta, M. and Helble, M. (eds.), *Trade Adjustment in Asia: Past Experiences and Lessons Learned*, Tokyo and Geneva: Asian Development Bank Institute (ADB) and World Trade Organization (WTO).
- Onkokame, M., Schoentgen, A. and Gillwald, A. (2018), "What Is the State of Microwork in Africa? A View from Seven Countries", Policy Paper Series No. 5, Cape Town: Research ICT Africa.
- Organisation for Economic Co-operation and Development (OECD) (2018), *Mapping of Investment Promotion Agencies in OECD Countries*, Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD) (2021), *The Digital Transformation of SMEs*, Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD) (2023a), *OECD Regional Outlook 2023: The Longstanding Geography of Inequalities*, Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD) (2023b), *OECD SME and Entrepreneurship Outlook 2023*, Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD) (2024), *Breaking the Vicious Circles of Informal Employment and Low-Paying Work*, Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD) and World Trade Organization (WTO) (2024), *Aid for Trade at a Glance 2024*, Paris and Geneva: OECD and WTO.
- Orihuela, J.C. and Gamarra Echenique, V. (2019), "Volatile and Spatially Varied: The Geographically Differentiated Economic Outcomes of Resource-based Development in Peru, 2001–2015", *The Extractive Industries and Society*, 6(4): 1143–1155.
- Orkoh, E. and Stolzenburg, V. (2020), "Gender-Specific Differences in Geographical Mobility: Evidence from Ghana", Staff Working Paper No. ERSD-2020-01, Geneva: World Trade Organization (WTO).
- Ortiz-Ospina, E. and Roser, M. (2023), "Economic Inequality by Gender", Oxford (UK): Our World in Data.
- Ossa, R. (2011), "A 'New Trade' Theory of GATT/WTO Negotiations", *Journal of Political Economy*, 119(1): 122–152.
- Ossa, R. (2012), "Profits in the 'New Trade' Approach to Trade Negotiations", *American Economic Review*, 102(3): 466–469.
- Ouédraogo, E., Ouédraogo, I. and Lompo, E. (2020), "Political Instability and Firm Performance: A Microeconomic Evidence from Ivory Coast", *American Journal of Economics and Business Administration*, 12(1): 49–55.
- Ouwehand, J. and Layton, M. (2021), "Four Ways to Improve Trade Rules and Support Climate Action", Geneva: World Economic Forum (WEF).

- Owen, J.R. and Kemp, D. (2015), "Mining-Induced Displacement and Resettlement: A Critical Appraisal", *Journal of Cleaner Production*, 87: 478–488.
- Pahl, S., Timmer, M.P., Gouma, R. and Woltjer, P.J. (2022), "Jobs and Productivity Growth in Global Value Chains: New Evidence for Twenty-five Low- and Middle-Income Countries", *The World Bank Economic Review*, 36(3): 670–686.
- Park, S.H., Lundquist, K. and Stolzenburg, V. (2023), "Global Value Chains for Inclusive Development", in *Global Value Chain Development Report 2023: Resilient and Sustainable GVCs in Turbulent Times*, Shanghai: University of International Business and Economics (UIBE), Asian Development Bank (ADB), Institute of Developing Economies - Japan External Trade Organization (IDE-JETRO), and World Trade Organization (WTO).
- Pastor, L. and Veronesi, P. (2018), "Inequality Aversion, Populism, and the Backlash Against Globalization", BFI Working Paper No. 2018-53, Chicago (IL): Becker Friedman Institute (BFI).
- Patel, D., Sandefur, J. and Subramanian, A. (2021), "The New Era of Unconditional Convergence", *Journal of Development Economics*, 152: 102687.
- Pergelova, A., Manolova, T., Simeonova-Ganeva, R. and Yordanova, D. (2019), "Democratizing Entrepreneurship? Digital Technologies and the Internationalization of Female-Led SMEs", *Journal of Small Business Management*, 57(1): 14–39.
- Pfeffer, F.T. (2018), "Growing Wealth Gaps in Education", *Demography*, 55(3): 1033–1068.
- Piermartini, R. and Rubinová, S. (2021), "How Much Do Global Value Chains Boost Innovation?", *Canadian Journal of Economics/Revue Canadienne d'Économique*, 54(2): 892–922.
- Piketty, T. (2003), "Income Inequality in France, 1901-1998", *Journal of Political Economy*, 111(5): 1004–1042.
- Piketty, T. and Saez, E. (2003), "Income Inequality in the United States, 1913–1998", *The Quarterly Journal of Economics*, 118(1): 1–41.
- Piketty, T., Saez, E. and Zucman, G. (2018), "Distributional National Accounts: Methods and Estimates for the United States", *The Quarterly Journal of Economics*, 133(2): 553–609.
- Pinkovskiy, M., Sala-i-Martin, X., Chatterji-Len, K. and Nober, W.H. (2024), "Inequality Within Countries Is Falling: Underreporting-Robust Estimates of World Poverty, Inequality and the Global Distribution of Income", NBER Working Paper No. 32203, Cambridge (MA): National Bureau of Economic Research (NBER).
- Piveteau, P. and Smagghue, G. (2024), "Foreign Competition along the Quality Ladder", *The Economic Journal*, 134(660): 1578–1636.
- Pomeranz, K. (2000), *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Princeton (NJ): Princeton University Press.
- Poole, J.P. (2013), "Knowledge Transfers from Multinational to Domestic Firms: Evidence from Worker Mobility", *Review of Economics and Statistics*, 95(2): 393–406.
- Porto, G. (2010), "International Market Access and Poverty in Argentina", *Review of International Economics*, 18(2): 396–407.
- Posada, K.C., Ganne, E. and Piermartini, R. (2020), "The Role of WTO Committees Through the Lens of Specific Trade Concerns Raised in the TBT Committee", Staff Working Paper No. ESRD-2020-09, Geneva: World Trade Organisation (WTO).
- Prasad, E.S. (2023), "China Stumbles But Is Unlikely to Fall", *Finance & Development Magazine*, December 2023.
- Prinsloo, L. (2021), "Facebook to Expand Planned Undersea Cable Network in Africa", *Bloomberg*, 16 August 2021.
- Rashid, A.T. (2016), "Digital Inclusion and Social Inequality: Gender Differences in ICT Access and Use in Five Developing Countries", *Gender, Technology and Development*, 20(3): 306–332.
- Redding, S.J. and Turner, M.A. (2015), "Transportation Costs and the Spatial Organization of Economic Activity", in Duranton, G., Henderson, J. V., and Strange, W. C. (eds.). *Handbook of Regional and Urban Economics*, Amsterdam: Elsevier.
- Renglet, C. (2022), "The Recognition of the Special Relationship of Indigenous Peoples with their Environment under International Law: A Potential Advantage in Climate Litigation?", *International Journal on Minority and Group Rights*, 29(4): 720–746.
- Richter, J. and Verbeet, T. (2020), "Preference Utilization", in Mattoo, A., Rocha, N., and Ruta, M. (eds.). *Handbook of Deep Trade Agreements*, Washington, D.C.: World Bank.
- Rifin, A. and Naully, D. (2020), "The Impact of Involvement in the Global Value Chain on Coffee Farmers in Indonesia: Case Study of Margamulya Coffee Producer Cooperative and Mitra Malabar Cooperative, Bandung, Indonesia", ADBI Working Paper Series No. 1143, Tokyo: Asian Development Bank Institute (ADBI).
- Rijkers, B., Freund, C. and Nucifora, A. (2017), "All in the Family: State Capture in Tunisia", *Journal of Development Economics*, 124: 41–59.
- Rodríguez-Clare, A. (2001), "Costa Rica's Development Strategy Based on Human Capital and Technology: How It Got There, the Impact of Intel, and Lessons for Other Countries", *Journal of Human Development*, 2(2): 311–324.
- Rodrik, D. (2007), *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*, Princeton (NJ): Princeton University Press.
- Rodrik, D. (2013), "Unconditional Convergence in Manufacturing", *The Quarterly Journal of Economics*, 128(1): 165–204.
- Rodrik, D. (2016), "Premature Deindustrialization", *Journal of Economic Growth*, 21(1): 1–33.
- Rodrik, D. and Sandhu, R. (2024), "Servicing Development: Productive Upgrading of Labor-Absorbing Services in Developing Economies", Reimagining the Economy Policy Paper, Cambridge (MA): Harvard University Kennedy School of Government.
- Rodrik, D. and Stiglitz, J.E. (2024), "A New Growth Strategy for Developing Nations", Network Paper, New York: Columbia University.
- Romer, P.M. (1986), "Increasing Returns and Long-Run Growth", *Journal of Political Economy*, 94(5): 1002–1037.
- Roser, M. (2024), "The Short History of Global Living Conditions and Why It Matters that we Know It", Oxford (UK): Our World in Data.
- Rubinová, S. and Sebt, M. (2021), "The WTO Trade Cost Index and Its Determinants", Staff Working Paper No. ERSD-2021-6, Geneva: World Trade Organization (WTO).
- Ruggieri, A. (2022), "Trade and Labor Market Institutions: A Tale of Two Liberalizations", Unpublished Manuscript, Nottingham (UK): University of Nottingham.
- Saba, C.S. and David, O.O. (2020), "Convergence Patterns in Global ICT: Fresh Insights from a Club Clustering Algorithm", *Telecommunications Policy*, 44(10): 102010.
- Salazar Xirinachs, J.M. (2022), "El Sector/Clúster de Dispositivos Médicos de Costa Rica: Estudio de Caso", Technical Note No. IDB-TN-02627, Washington, D.C.: Inter-American Development Bank (IADB).
- Sampson, T. (2023), "Technology Gaps, Trade, and Income", *American Economic Review*, 113(2): 472–513.
- Sauvant, K.P. (2015), "Attracting Foreign Direct Investment and Benefiting from It: Challenges for the Least Developed Countries", *Transnational Corporations Review*, 7(2): 125–127.
- Sazedj, S. and Tavares, J. (2022), "The Gender Gap at the Top: How Network Size and Composition Impact CEO Pay", CEPR Discussion Paper No. 1676, London (UK): Centre for Economic Policy Research (CEPR).
- Scalera, J. (2017), *Negotiating Membership in the WTO and the EU: The Politics of Accession*, London (UK): Routledge.
- Schmitt-Grohé, S. and Uribe, M. (2018), "How Important Are Terms-of-Trade Shocks?", *International Economic Review*, 59(1): 85–111.
- Schmitz, J.A. (2021), "Because of Monopolies, Income Inequality Significantly Understates Economic Inequality", Working Paper No. 777, Minneapolis: Federal Reserve Bank of Minneapolis.
- Sequeira, S. and Djankov, S. (2014), "Corruption and Firm Behavior: Evidence from African Ports", *Journal of International Economics*, 94(2): 277–294.

- Shah, V.M. and Shah, D. (2023), "Impact of Digitalisation in Education - A Literature Review Analysis", *Towards Excellence*, 333–343.
- Sharma, S. (2023), "Do Macroeconomic Factors Influence Gold Prices? A Study of Empirical Evidence across Global Markets", *International Journal of Education and Management Studies*, 13(3): 272–278.
- Shen, C. and Zhao, X. (2023), "How Does Income Inequality Affects Economic Growth At Different Income Levels?", *Economic Research-Ekonomska Istraživanja*, 36(1): 864–884.
- Shiphub (2021), "International Freight Platform", Hannover: International Freight Platform.
- Shu, P. and Steinwender, C. (2019), "The Impact of Trade Liberalization on Firm Productivity and Innovation", *Innovation Policy and the Economy*, 19(1): 39–68.
- Signé, L. (2020), "Tech Investment Is Crucial to Unlock Africa's Potential in a Post-Coronavirus World", MIT Technology Review Insights.
- Signé, L. (2023a), *Africa's Fourth Industrial Revolution*. Cambridge (UK): Cambridge University Press.
- Signé, L. (2023b), *Unlocking Africa's Business Potential: Trends, Opportunities, Risks, and Strategies*, Washington, D.C.: Brookings Institution Press.
- Signé, L. and Ndung'u, N. (2020), "The Fourth Industrial Revolution and Digitalization Will Transform Africa Into a Global Powerhouse", in *Foresight Africa 2020 Report*, Washington, D.C.: Brookings Institution.
- Solimano, A. and Guajardo, D.C. (2018), "The Copper Sector, Fiscal Rules, and Stabilization Funds in Chile: Scope and Limits", in Addison, T. and Roe, A. (eds.). *Extractive Industries*, Oxford (UK): Oxford University Press.
- Son, N.H. and Son, D.D. (2011), "Improving Accessibility of Financial Services in the Border-Gate Areas to Facilitate Cross-Border Trade: The Case of Viet Nam and Implications for Greater Mekong Subregion Cooperation", Greater Mekong Subregion-Phnom Penh Plan for Development Management Research Report Series No. 1.4, Manila: Asian Development Bank (ADB).
- Songwe, V., Stern, N. and Bhattacharya, A. (2022), *Finance for Climate Action: Scaling Up Investment for Climate and Development*, Report of the Independent High-Level Expert Group on Climate Finance, London (UK): Grantham Research Institute on Climate Change and the Environment.
- Spence, M. (2011), *The Next Convergence: The Future of Economic Growth in a Multispeed World*. New York: Farrar, Straus and Giroux.
- Springford, J., Tordoir, S. and Resende Carvalho, L. (2024), "Why Cities Must Drive Growth in the EU's Single Market", CER Policy Brief, London (UK): Center for European Reform (CER).
- Startz, M. (2017), "The Value of Face-to-Face: Search and Contracting Problems in Nigerian Trade", PEDL Research Papers No. 2619, London (UK): Centre for Economic Policy Research (CEPR).
- Steinwender, C. (2018), "Real Effects of Information Frictions: When the States and the Kingdom Became United", *American Economic Review*, 108(3): 657–696.
- Stephenson, M. (2020), "Digital FDI: Policies, Regulations and Measures to Attract FDI in the Digital Economy", World Economic Forum White Paper, Geneva: World Economic Forum (WEF).
- Stern, N.H. (2007), *The Economics of Climate Change: the Stern Review*, Cambridge (MA): Cambridge University Press.
- Swinnen, J. (2016), "Economics and Politics of Food Standards, Trade, and Development", *Agricultural Economics*, 47(S1): 7–19.
- Talmage-Rostron, M. (2024), "How Will Artificial Intelligence Affect Jobs 2024-2030", Washington, D.C.: Nexford University.
- Tanaka, K. (2021), "The European Union's Reform in Rules of Origin and International Trade: Evidence from Cambodia", *The World Economy*, 44(10): 3025–3050.
- Tanaka, K. (2022), "The European Union's Withdrawal of Trade Preferences for Cambodia", *The World Economy*, 45(11): 3398–3419.
- Tanaka, K. and Fukunishi, T. (2022), "Rules of Origin and Exports in Developing Economies: The Case of Garment Products", *Journal of Asian Economics*, 82: 101514.
- Tanaka, K. and Greaney, T.M. (2024), "Trade and Employment in the Formal and Informal Sectors: A Natural Experiment from Cambodia", *Journal of Asian Economics*, 90: 101676.
- Tang, M.-K. and Wei, S.-J. (2009), "The Value of Making Commitments Externally: Evidence from WTO Accessions", *Journal of International Economics*, 78(2): 216–229.
- Tian, Y. (2024), "International Trade Liberalization and Domestic Institutional Reform: Effects of WTO Accession on Chinese Internal Migration Policy", *The Review of Economics and Statistics*, 106(3): 794–813.
- Topalova, P. (2007), "Trade Liberalization, Poverty and Inequality: Evidence from Indian Districts", in Harrison, A. (ed.). *Globalization and Poverty*, Chicago: University of Chicago Press.
- Topalova, P. (2010), "Factor Immobility and Regional Impacts of Trade Liberalization: Evidence on Poverty from India", *American Economic Journal: Applied Economics*, 2(4): 1–41.
- Topalova, P. and Khandelwal, A. (2011), "Trade Liberalization and Firm Productivity: The Case of India", *Review of Economics and Statistics*, 93(3): 995–1009.
- Traiberman, S. (2019), "Occupations and Import Competition: Evidence from Denmark", *American Economic Review*, 109(12): 4260–4301.
- U.S. Census Bureau (2023), *A Profile of U.S. Importing and Exporting Companies, 2020 - 2021*, Washington, D.C.: U.S. Census Bureau.
- U.S. Department of Commerce (2023), "Geographic Inequality on the Rise in the U.S.", Washington, D.C.: U.S. Department of Commerce.
- Ugarte, C., Olarreaga, M. and Saiovici, G. (2023), "Child Labour and Global Value Chains", *The World Economy*, 46(4): 941–968.
- Ukpe, A. and Khorana, S. (2021), "Special and Differential Treatment in the WTO: Framing Differential Treatment To Achieve (Real) Development", *Journal of International Trade Law and Policy*, 20(2): 83–100.
- Ulyssea, G. (2018), "Firms, Informality, and Development: Theory and Evidence from Brazil", *American Economic Review*, 108(8): 2015–2047.
- United Nations Conference on Trade and Development (UNCTAD) (2014), *Recent Developments in Investor-State Dispute Settlement (ISDS)*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2017), *Information Economy Report 2017: Science and Technology for Development*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2021a), *A European Union Border Carbon Adjustment Mechanism: Implications for Developing Countries*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2021b), *Handbook on Special Economic Zones in Africa: Towards Economic Diversification across the Continent*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2021c), *Multinational Enterprises and the International Transmission of Gender Policies and Practices*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2023a), *The Generalized System of Preferences: How Much Does It Matter for Developing Countries?*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2023b), *The State of Commodity Dependence 2023*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2024a), *Global Economic Fracturing and Shifting Investment Patterns: A Diagnostic of 10 FDI Trends and Their Development Implications*, Geneva: UNCTAD.
- United Nations Conference on Trade and Development (UNCTAD) (2024b), *Trade in Processed Food*, Geneva: UNCTAD.
- United Nations Development Programme (UNDP) (2013), *2013 Human Development Report: The Rise of the South: Human Progress in a Diverse World*, New York: United Nations.
- United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP) (2023), *Digital and Sustainable Trade Facilitation: Global Report 2023*, Bangkok: UN-ESCAP.

- United Nations Economic and Social Commission for Asia and the Pacific (United Nations ESCAP) (2023), *Policy Guidebook on Attracting and Promoting FDI in the Digital Economy*, Bangkok: United Nations ESCAP.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2024), "What You Need To Know About Literacy", Paris: UNESCO.
- United Nations Environment Programme (UNEP) (2023), *Adaptation Gap Report 2023: Underfinanced. Underprepared. Inadequate Investment and Planning on Climate Adaptation Leaves World Exposed*, Nairobi: UNEP.
- Ural Marchand, B. (2012), "Tariff Pass-Through and the Distributional Effects of Trade Liberalization", *Journal of Development Economics*, 99(2): 265–281.
- Ural Marchand, B. (2019), "Inequality and Trade Policy: The Pro-Poor Bias of Contemporary Trade Restrictions", *Review of Income and Wealth*, 65(S1): S123–S152.
- Van Der Ploeg, F. and Poelhekke, S. (2009), "Volatility and the Natural Resource Curse", *Oxford Economic Papers*, 61(4): 727–760.
- van der Weide, R., Lakner, C., Mahler, D.G., Narayan, A. and Gupta, R. (2024), "Intergenerational mobility around the world: A new database", *Journal of Development Economics*, 166: 103167.
- Van Neuss, L. (2015), "Why Did the Industrial Revolution Start in Britain?", Unpublished Manuscript, Liege: University of Liege.
- Venables, A.J. (2016), "Using Natural Resources for Development: Why Has It Proven So Difficult?", *Journal of Economic Perspectives*, 30(1): 161–184.
- Verhoogen, E.A. (2008), "Trade, Quality Upgrading, and Wage Inequality in the Mexican Manufacturing Sector", *The Quarterly Journal of Economics*, 123(2): 489–530.
- Volpe Martincus, C. and Carballo, J. (2008), "Is Export Promotion Effective in Developing Countries? Firm-level Evidence on the Intensive and the Extensive Margins of Exports", *Journal of International Economics*, 76(1): 89–106.
- Walter, S. (2021), "The Backlash Against Globalization", *Annual Review of Political Science*, 24: 421–442.
- Warwick, K. (2013), "Beyond Industrial Policy: Emerging Issues and New Trends", OECD Science, Technology and Industry Policy Paper No. 2, Paris: Organisation for Economic Co-operation and Development (OECD).
- Waugh, M.E. (2023), "Heterogeneous Agent Trade", FED Minneapolis Staff Report No. 653, Minneapolis: Federal Reserve Bank of Minneapolis.
- Wolfe, R. (2023), "Transparency Matters For LDCs Too: The Relevance of Current Debates on WTO Reform", in *LDCs and the Multilateral Trading System: Looking Forward. A Collection of Essays*, Geneva: World Trade Organization (WTO) and Enhanced Integrated Framework (EIF).
- World Bank (2020), *World Development Report 2020: Trading for Development in the Age of Global Value Chains*, Washington, D.C.: World Bank.
- World Bank (2022), *Poverty and Shared Prosperity 2022: Correcting Course*, Washington, D.C.: World Bank.
- World Bank (2024a), *Global Economic Prospects, January 2024*, Washington, D.C.: World Bank.
- World Bank (2024b), *Remittance Prices Worldwide Quarterly: An Analysis of Trends in Cost of Remittance Services*, Washington, D.C.: World Bank.
- World Bank (2024c), *Migration and Development Brief 40: Remittances Slowed in 2023, Expected to Grow Faster in 2024*, Washington, D.C.: World Bank.
- World Bank and World Trade Organization (WTO) (2015), *The Role of Trade in Ending Poverty*, Geneva: WTO.
- World Bank and World Trade Organization (WTO) (2020), *Women and Trade: The Role of Trade in Promoting Gender Equality*, Washington, D.C. and Geneva: World Bank and WTO.
- World Bank and World Trade Organization (WTO) (2023a), *Trade in Services for Development: Fostering Sustainable Growth and Economic Diversification*, Washington, D.C. and Geneva: World Bank and WTO.
- World Bank and World Trade Organization (WTO) (2023b), *Turning Digital Trade into a Catalyst for African Development*, Policy Note, Washington, D.C. and Geneva: World Bank and WTO.
- World Trade Organization (WTO) (2003), *World Trade Report 2003: Trade and Development*, Geneva: WTO.
- World Trade Organization (WTO) (2009), *World Trade Report 2009: Trade Policy Commitments and Contingency Measures*, Geneva: WTO.
- World Trade Organization (WTO) (2010), *World Trade Report 2010: Trade in Natural Resources*, Geneva: WTO.
- World Trade Organization (WTO) (2012), *World Trade Report 2012: Trade and Public Policies: A Closer Look at Non-Tariff Measures in the 21st Century*, Geneva: WTO.
- World Trade Organization (WTO) (2015), *World Trade Report 2015: Speeding up Trade: Benefits and Challenges of Implementing the WTO Trade Facilitation Agreement*, Geneva: WTO.
- World Trade Organization (WTO) (2016), *World Trade Report 2016: Levelling the Trading Field for SMEs*, Geneva: WTO.
- World Trade Organization (WTO) (2017), *World Trade Report 2017: Trade, Technology and Jobs*, Geneva: WTO.
- World Trade Organization (WTO) (2019), *World Trade Report 2019: The Future of Services Trade*, Geneva: WTO.
- World Trade Organization (WTO) (2020a), "Report of the TPRB from the Director-General on Trade-Related Developments", Geneva: WTO.
- World Trade Organization (WTO) (2020b), *World Trade Report 2020: Government Policies to Promote Innovation in the Digital Age*, Geneva: WTO.
- World Trade Organization (WTO) (2021a), "Trade Costs for Landlocked and Coastal Economies: Estimates Based on GTAP Data", Geneva: WTO.
- World Trade Organization (WTO) (2021b), *World Trade Report 2021: Economic Resilience and Trade*, Geneva: WTO.
- World Trade Organization (WTO) (2021c), "WTO Trade Cost Index: Evolution, Incidence and Determinants", Geneva, WTO.
- World Trade Organization (WTO) (2022), *World Trade Report 2022: Climate Change and Trade*, Geneva: WTO.
- World Trade Organization (WTO) (2023a), *Global Trade Outlook and Statistics 2023*, Geneva: WTO.
- World Trade Organization (WTO) (2023b), "Trade Monitoring Report Update: A Year of Turbulence on Food and Fertilizers Markets", Geneva: WTO.
- World Trade Organization (WTO) (2023c), *World Trade Report 2023: Re-globalization for a Secure, Inclusive and Sustainable Future*, Geneva: WTO.
- World Trade Organization (WTO) (2024a), "Examining MSMEs' composition and participation in international trade through meta survey data", MSME Research Note #4, Geneva: WTO.
- World Trade Organization (WTO) (2024b), "High Demand for Energy-related Critical Minerals Creates Supply Chain Pressures", Geneva: WTO.
- World Trade Organization (WTO) (2024c), *WTO Technical Assistance Annual Report 2023*, Geneva: WTO.
- World Trade Organization (WTO) and International Renewable Energy Agency (IRENA) (2021), *Trading into a Bright Energy Future. The Case for Open, High-Quality Solar Photovoltaic Markets*, Geneva: WTO.
- World Trade Organization (WTO) and Organisation for Economic Co-operation and Development (OECD) (2021), "Services domestic regulation in the WTO: Cutting red tape, slashing trade costs, and facilitating services trade", OECD-WTO Trade Policy Brief, Paris and Geneva: OECD and WTO.
- Wu, T. and Shao, W. (2022), "How Does Digital Economy Drive Industrial Structure Upgrading: An Empirical Study Based on 249 Prefecture-level Cities in China", *PLoS One*, 17(11): e0277787.

Yang, C. (2023), "Digital Economy Drives Regional Industrial Structure Upgrading: Empirical Evidence from China's Comprehensive Big Data Pilot Zone Policy", *PLoS One*, 18(12): e0295609.

Yang, F., Wang, Y. and Whang, U. (2023), "Export Effects of Non-Tariff Measures: The Role of Aid for Trade", *The Journal of International Trade & Economic Development*, 1–26.

Yi, M., Mueller, S. and Stegmaier, J. (2024), "Industry Mix, Local Labor Markets, and the Incidence of Trade Shocks", *Journal of Labor Economics*, 42(3): 837–875.

Young, C. (2012), "Losing a Job: The Nonpecuniary Cost of Unemployment in the United States", *Social Forces*, 91(2): 609–634.

Zavala, L. (2023), "Unfair Trade? Monopsony Power in Agricultural Value Chains", Unpublished Manuscript, New Haven (CT): Yale University.

Zhou, K. and Zhang, J. (2021), "Trade Normalization, Export Quality, and In-Migration of Skilled Workers: Evidence from China", *Journal of Economic Behavior & Organization*, 184: 375–387.

Zi, Y. (2018), "Trade Liberalization and the Hukou System of the People's Republic of China: How Migration Frictions Can Amplify the Unequal Gains from Trade", ADBI Working Paper No. 887, Tokyo: Asian Development Bank Institute (ADBI).

Zi, Y. (2020), "Trade Liberalization and the Great Labor Reallocation", CEPR Discussion Paper DP14490, London (UK): Centre for Economic Policy Research (CEPR).

Ziramba, E. (2011), "Export-Led Growth In South Africa: Evidence From The Components Of Exports", *Studies in Economics and Econometrics*, 35(1): 1–14.

Note

WTO members are frequently referred to as “countries”, although some members are not countries in the usual sense of the word but are officially “customs territories”. The definition of geographical and other groupings in this report does not imply an expression of opinion by the WTO Secretariat concerning the status of any country or territory, the delimitation of its frontiers, nor the rights and obligations of any WTO member in respect of WTO agreements. There are no WTO definitions of “developed” and “developing” economies. Members announce for themselves whether they are “developed” or “developing” economies. The references to developing and developed economies, as well as any other sub-categories of members used in this report, are for statistical purposes only, and do not imply an expression of opinion by the Secretariat concerning the status of any country or territory, the delimitation of its frontiers, nor the rights and obligations of any WTO member in respect of WTO agreements.

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World Trade Report 2024

Over the past 30 years, the world has witnessed a period of unprecedented income convergence, as the wide gap in income levels between economies has narrowed. Economic growth has improved living conditions and prospects for many people around the world. However, not all individuals, regions and economies have benefited equally from the changes brought about by more open trade.

The *World Trade Report 2024* explores the complex interlinkages between trade and inclusiveness across and within economies. Openness to international trade can drive economic growth, but many low- and middle-income economies struggle to diversify or to integrate into world trade. Although trade supports numerous jobs and provides access to affordable goods and services, some individuals can face challenges in adapting to new economic conditions following trade openness. However, trade protectionism neither protects the overall economy, nor promotes inclusiveness within economies.

Diversifying global value chains, reducing trade costs through digitalization, and transitioning to a low-carbon economy can create new opportunities for low- and middle-income economies. Addressing remaining barriers to trade and investment, facilitating the implementation of existing WTO agreements, and ensuring that the WTO is fit for new challenges are crucial to support inclusiveness across and within economies. Furthermore, trade policies need to be complemented by domestic measures, such as labour, education and competition policies, so that the gains from trade can flow to workers and consumers, and so that those individuals can move to benefit from those gains. WTO cooperation with other international organizations can magnify combined action on inclusiveness across and within economies.

