

# The role of trade in developing countries' road to recovery

Joint policy note



Farmer using digital technology to collect data and monitor crops, South Africa.

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## ACKNOWLEDGEMENTS

The Role of Trade in Developing Countries' Road to Recovery is a joint policy note by the World Bank and the World Trade Organization (WTO), prepared under the general responsibility and guidance of Indermit Gill (Vice President for Equitable Growth, Finance and Institutions, World Bank); Anabel González (WTO Deputy Director General); Mona Haddad (Global Director, Trade, Investment and Competitiveness, World Bank); Robert Koopman (WTO Chief Economist and Director of the Economic Research and Statistics Division); and Antonio Nucifora (Practice Manager, Global Trade and Regional Integration Unit, World Bank).

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## FOREWORD

Two years after the COVID-19 pandemic began, the gap between advanced and developing economies is still growing. Unequal and slow access to vaccines in developing and least developed countries is the major reason. Before the pandemic struck, trade was helping to end poverty. The pandemic is estimated to push 100 million people back into extreme poverty in 2021. This joint policy note, "The Role of Trade in Developing Countries' Road to Recovery", discusses how international trade can help developing countries recover faster from the pandemic.

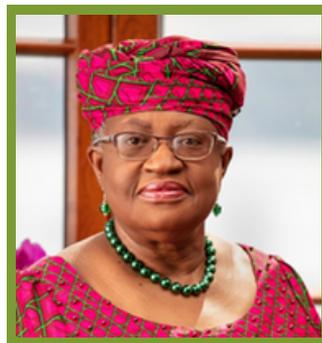
Although global trade contracted sharply at the beginning of the pandemic, merchandise and digitally enabled services trade have bounced back and are leading the economic recovery, despite some customs and logistics bottlenecks. Trade will continue to play an important role in advancing poverty reduction while supporting economic recovery. But the growth of trade remains uneven. The recovery cannot be as inclusive as it ought to be because vulnerable groups such as women and the poor are underrepresented in booming sectors such as digitally supplied services, and overrepresented in struggling sectors such as tourism. We need complementary policies to ensure that the gains from trade are shared.

Addressing vulnerabilities such as limited economic diversification, poor access to trade finance and digital technologies is important to recover faster and be resilient to future shocks. Accelerating the production and distribution of COVID-19 vaccines is a prerequisite to economic recovery in poorer countries.

The World Bank Group and the World Trade Organization play complementary roles in promoting trade as a tool for economic recovery and development. By reducing trade costs, streamlining customs procedures, promoting policy predictability and building trade capacity, their activities grow the global economy and improve the lives of people. This paper, written by the staffs of the two organizations, discusses how this can best be done. At stake is a quick recovery from the pandemic and sustained economic progress afterwards.



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## Main Findings

- The expansion of international trade and global value chains (GVCs) has been essential to development and poverty reduction.
- Trade and GVCs have proven to be resilient and are driving the recovery from COVID-19.
- But the pandemic has shone a light on some developing country vulnerabilities that must be addressed to prepare for future trade shocks.
- Trade can continue to drive poverty reduction although complementary measures are required to distribute the gains from trade more widely.
- New technologies are creating trade opportunities, but it is important to ensure low-income countries have the capacities to benefit.
- Trade can contribute to disaster risk reduction and will be critical in the transition to a low-carbon future.
- There are a range of measures that countries—individually and collectively—with support from the international community can take to ensure that trade facilitates the move to a green, resilient, and inclusive development path.

## INTRODUCTION

**Trade has been a phenomenal driver of poverty reduction over the past 30 years and participation in GVCs has been a force for job and wealth creation.** Nevertheless, tensions and skepticism over the impact of trade have been rising. This is happening at a time when trade is more important than ever to cope with and recover from the COVID-19 pandemic. A retrenchment from trade now would further increase the serious adverse impact of the pandemic on poverty.

**Trade can also play a key role in addressing the challenge of global warming.** While trade results in carbon emissions, it is fundamental to the solution to climate change in terms of facilitating the transition to low-carbon growth and supporting adaptation to rising temperatures and changing precipitation patterns. Trade is also critical to recovery from increasingly frequent extreme weather events.

**Open trade policies and efforts to reduce trade costs remain critically important while recognizing the need to recalibrate an approach to trade that places it firmly and squarely within a resilient, inclusive, and green approach to development. [1]**

This note summarizes three inter-related policy challenges to which trade can be a fundamental part of the answer: (i) the recovery from COVID-19 and economic resilience to future global shocks; (ii) delivering on the promise to end extreme poverty and achieving a more inclusive world; and (iii) mitigating carbon emissions and adapting to climate change.

[1] In this context, the World Bank Group is supporting countries embarking on a green, resilient, and inclusive development (GRID) path (World Bank, 2021a).

***The expansion of international trade and GVCs has been essential to economic development and poverty reduction.***

**Trade has been a major contributor to prosperity and poverty reduction although some countries in some regions have benefited more than others.** The value of trade comes from its potential to create better jobs, increase real incomes, provide a greater choice of products, and help secure a more sustainable future. Some economies, in particular in East Asia, have been most able to benefit from such trade-oriented economic development. For the poor, trade has the potential to transform their lives. Complementary policies, including those to facilitate adjustment to new economic conditions, can help mitigate the costs of transitions and potential income inequalities.

**Trade promotes net welfare gains nationally and globally, based on comparative advantages in accordance with the basic theory of trade (Smith, 1776; Ricardo, 1817).** A large empirical literature on trade and growth supports a positive effect (Dollar, 1992; Harrison, 1996; Dollar and Kraay, 2001, and Dreher, 2006). Empirical evidence suggests that raising the trade-to-GDP ratio by one percentage point increases income per capita by 1 to 2 percent depending on the estimation method used (Frankel and Romer, 1999).

Although there has been criticism of the data and methodology employed, the empirical evidence, addressing these criticisms, confirms trade has a significant effect on income with an elasticity of roughly one-half (Feyrer, 2019). Differences in predicted trade growth can explain roughly 17 percent of the variation in cross-country income growth between 1960 and 1995.

**Global trade has also played a major role in reducing poverty in developing countries.** Recent research shows that comprehensive trade liberalization in developing countries increases economic growth by an average of 1.0 to 1.5 percentage points, resulting in 10 to 20 percent higher income after a decade (Irwin, 2019). From 1990 to 2017, developing countries increased their share in global exports from 16 percent to 30 percent, helping to cut the proportion of the world's population living in extreme poverty from 36 percent to 9 percent (Figure 1). Many developing countries, especially those in East Asia, have used trade to create jobs, integrate into global and regional value chains, and reduce poverty. Without the growing participation of developing countries in international trade, and sustained efforts to lower barriers to the integration of markets, it is hard to see how this reduction in poverty could have been achieved.

**Figure 1: Trade has been a driver of poverty reduction**

Source: WDI.

### ***Trade has been resilient and is driving the recovery from COVID-19***

#### **COVID-19 is dealing an unprecedented setback to the worldwide effort to reduce extreme poverty and inequality.**

COVID-19 is shrinking GDP, reducing cross-border investment flows, and deepening debt challenges already present prior to the pandemic. It has pushed the world into its deepest economic recession since the Second World War, with a global contraction of 3.3 percent of GDP in 2020, and today more economies are in simultaneous recession than at any other time in the past 150 years.

#### **The crisis continues to hit the most vulnerable the hardest.** The World Bank

estimates that it has pushed around 100 million people into extreme poverty, led to the loss of the equivalent of more than 250 million jobs in 2020 and exacerbated already worsening food insecurity (World Bank, 2020). Moreover, the impact is not gender-neutral. With 740 million women globally in informal employment and a majority in services, women have been particularly hard hit by the crisis. The poor are suffering from illnesses, job and income losses, food supply disruptions, school closures, lower remittance flows, and inequalities in access to vaccines and medical treatment. There are stark differences in opportunities to leverage digital solutions, further marginalizing informal workers, women, and other vulnerable groups.

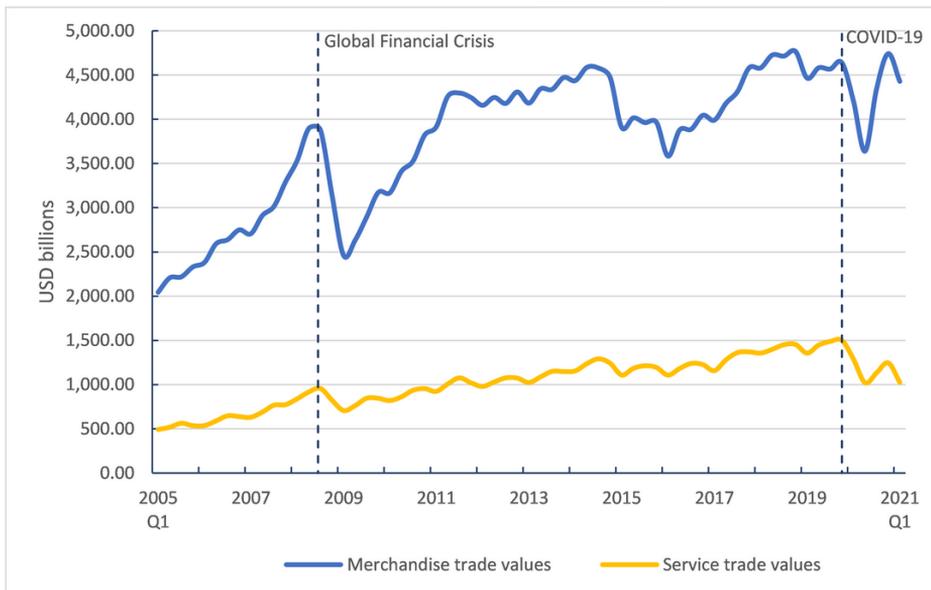
**Initially, the pandemic severely disrupted global trade.** Lockdown, quarantine, and social distancing measures, along with travel restrictions and border closures, an important part of the initial policy response to the pandemic, disrupted freight transport, business travel, and the supply of services that rely on the presence of individuals abroad (WTO, 2020b, 2020d). Particular attention has been focused on GVCs, and especially those with high levels of dependence on particular nodes or countries in the network and their propensity to transmit shocks from one country to another. For example, a relative lack of microprocessors is having serious knock-on effects in sectors such as motor vehicle production (Bown, 2021).

**Trade has been helping to drive the economic recovery thanks in part to a robust rebound in goods trade.** Trade contributes to speeding up economic recovery from the pandemic by providing sustained foreign demand for exports and ensuring the availability of imported intermediate products and services (WTO, 2021b) (Figure 2). The Least Developed Countries, which have limited ability to spur recovery through fiscal stimulus packages, are particularly dependent on trade recovery as a source of economic growth. While goods trade dropped by 5.3 percent in 2020, the WTO Secretariat forecasts a 10.8 percent rise in 2021- a volume of world trade higher than before the pandemic (Figure 3). Merchandise trade has recovered

more quickly than GDP after the initial shock of COVID-19. Furthermore, GDP recovery has been faster in countries with strong pre-existing trade linkages to those countries with fewer COVID cases, underscoring the mutual support trade provides to economic growth and the management of risk (WTO, 2021b).

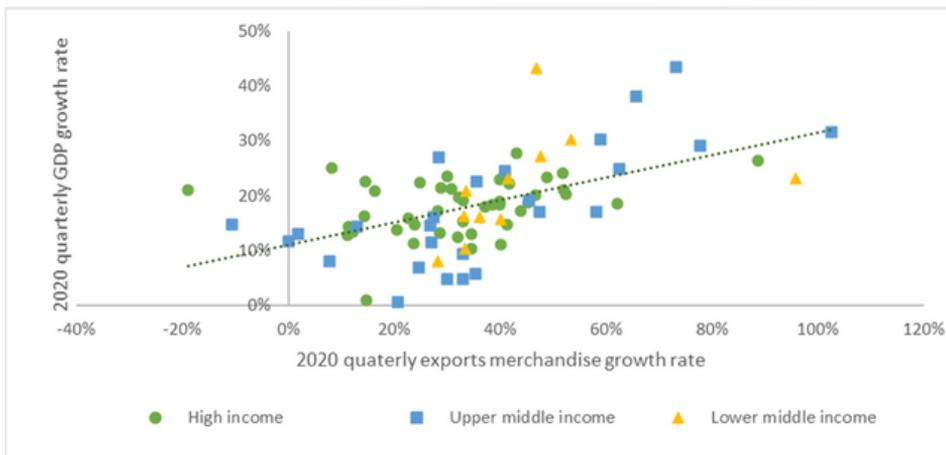
**Supply-side issues, such as semiconductor scarcity and port backlogs, may strain some supply chains but are unlikely to have large impacts on global trade recovery.** The strong rebound in global trade and the increased demand for consumer durable goods (at the expense of services, such as international travel, hotels, and restaurants) have put the global shipping system under stress. In particular, a sustained surge in demand for shipping containers from East Asia, especially from China, combined with no slack capacity in container ships has sharply increased shipping costs. Although this recent surge in shipping costs appears to be more due to strong demand for traded goods than to supply constraints, operational disruptions, including pandemic-related shutdowns of major ports (e.g. Los Angeles, Yantian and Ningbo in China) as well as other disruptions (e.g. the Evergreen incident in the Suez Canal) have put logistic systems under further stress and increased trade costs uncertainty (WTO, 2021d). However, the biggest downside risk faced by trade recovery continues to come from the pandemic itself.

**Figure 2: Quarterly World Trade (2005-2021)**



Source: WTO

**Figure 3: Economic Recovery is associated with trade recovery during the COVID-19 pandemic**



Source: WTO (2021b) based on World Bank and WTO data

Note: The GDP and exports merchandise growth rates are defined as the percentage change from Q2 to Q4 2020

**Recovery has not been uniform, however, with the poorest countries faring the worst.** Failure to vaccinate in all countries against COVID-19 has led to a two-track recovery, with slower growth in economies with limited access to vaccines and low levels of GVC integration, which are frequently countries with the least fiscal space to support businesses and households. While some East Asian countries, such as China, have led the way in the trade recovery, others including in less globally integrated regions – Latin America, South Asia, and sub-Saharan Africa – continue to lag in the trade recovery, with goods imports in these regions still down 15-20 percent year-on-year in December 2020.

**Services trade is showing tentative signs of recovery with those services requiring face-to-face interaction more impacted by COVID-19 than other services, including those provided remotely, being more robust or increasing (World Bank, 2021e; WTO, 2021a).** In 2020, global services trade [2] was substantially lower than in 2019 due to the pandemic -- services exports were 19.3 percent lower and imports 20 percent lower. Travel was the service most negatively affected, but despite a decline in most types of services trade in 2020 relative to 2019, ICT, insurance, pension, and financial services trade increased. Increases in ICT services can be explained by more activities being conducted remotely due to social distancing measures and the

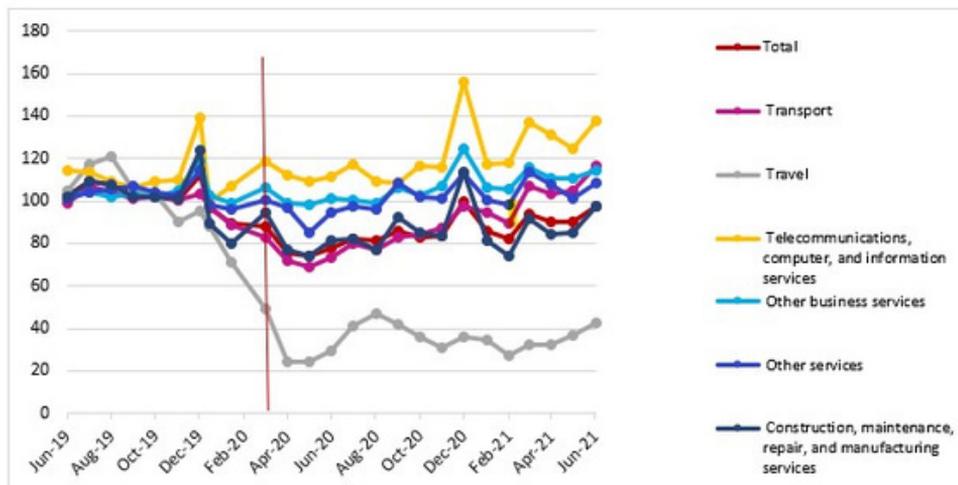
closure of borders. With the shift to greater digitization likely to persist, the importance of digitally enabled services will continue to grow during the recovery from COVID-19 and post-recovery. As of June 2021, global services exports had yet to recover to their pre-pandemic levels (Figure 4).

**GVCs have proven to be generally resilient but new policies, including those related to climate change, could entail some reorganization.** Although GVCs, especially those that are highly concentrated, can under specific conditions spread shocks, they have proven to also be a source of resilience to economic shocks notwithstanding recent supply chain challenges especially in relation to trade facilitation and logistics bottlenecks. The evidence so far is that countries more integrated in GVCs, particularly in advanced manufacturing and services, did better in terms of maintaining trade than countries less integrated and particularly those highly dependent on commodities (Figure 5).

Economies with diversified trade structures that are highly integrated in GVCs and less dependent on services that require face-to-face interaction, such as tourism and travel, have recovered faster from the pandemic.

**The crisis has shown that there are mechanisms by which GVCs can maintain trade relationships during a shock, enhancing resilience and paving**

[2] Annual global services exports and imports data include 98 economies that reported for 2020, which accounted for approximately 91 percent of global services exports and 89 percent of global services imports in 2017 according to data from the IMF.

**Figure 4: World Services Trade (2017-1019 = 100)**

**Source: Estimates based on WTO and UNCTAD data**

Note: World services trade includes data on services exports and imports. Data include 15 economies that reported in June 2021, which accounted for approximately 38 percent of global services exports and 39 percent of global services imports.

**the way for strong recovery.** Some of these mechanisms include diversification of sources of supply, raising inventory stocks, and fostering flexible production across sites (World Bank, 2021d; WTO, 2021b). This arises because the costs of establishing supplier networks can be substantial, resulting in a tendency for lead firms to sustain, rather than end, relationships with overseas suppliers. In addition, often when reputation matters, lead firms have provided financial and especially technical assistance to suppliers during a shock. This includes support of MNCs for their affiliates, and support of affiliates for local suppliers. GVCs ensure that in a global recession, if any part of the world recovers, the recovery is also transmitted through the value chain.

**Policies aimed at increasing “economic resilience” by reshoring production and unwinding trade integration can often have the opposite effect - and actually reduce resilience and slow down economic recovery (WTO, 2021b).**

Although empirical evidence on reshoring remains scarce, it continues to be part of the debate about economic resilience. [3] In general, market forces should determine firms' decisions to reshore or offshore. Moreover, a crisis and the subsequent recovery is a particularly bad time to be raising trade barriers, as the need for imports may increase and exports will be an important stabilizer and source of jobs, and incomes. Recent World Bank research finds that measures to maintain and enhance trade contribute to managing a crisis and supporting

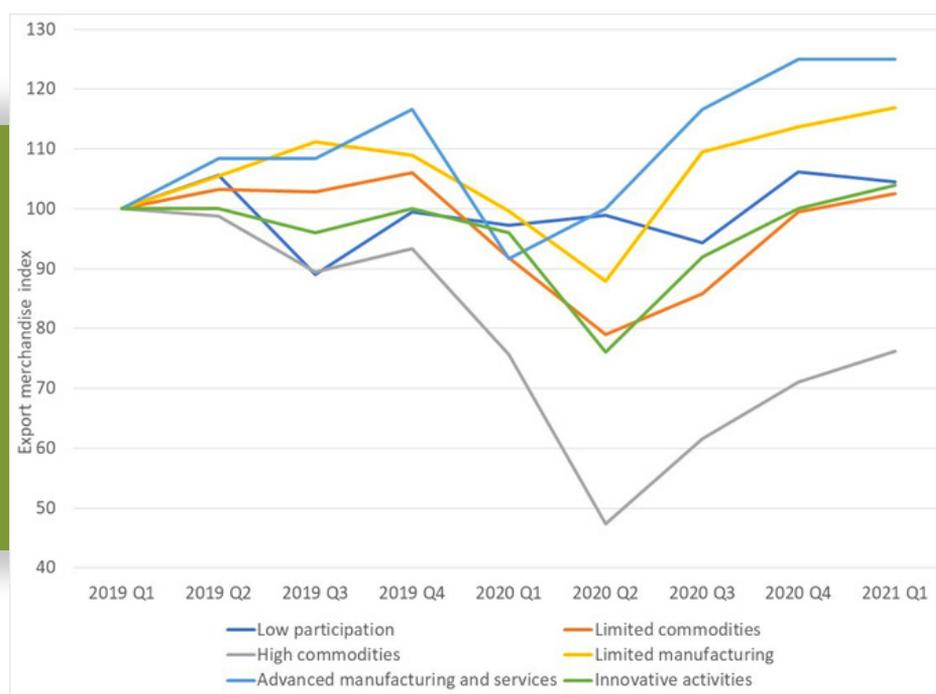
[3] Although there is no evidence of a reshoring trend, data suggests that near-shoring might be happening with some business operations being relocated to countries closer to their home market.

recovery while efforts to reshore production reduce trade and increase poverty in developing countries. Both developing and developed countries are better off in a globalized world during and after a crisis. Restrictive measures on trade to support a shift toward global reshoring to high-income countries and China could drive an additional 52 million people into extreme poverty, 80 percent of whom would be in Sub-Saharan Africa (World Bank, 2021d). So, on the one hand, attempting to deal with supply chain fragility through measures to reshore production would make all countries worse off, including those that implement them.

On the other hand, measures to streamline trade procedures and facilitate trade at borders can contribute to the crisis response by expediting the movement, release, and clearance of goods, including goods in transit, and enabling exchange of services, and pave the way for greater resilience to future shocks.

**Trade-related measures implemented in response to the pandemic continue to be repealed (OECD, WTO, and UNCTAD, 2021; WTO, 2021b, c).** As of mid-May 2021, around 21 percent of COVID-19 trade-facilitating measures and 54 percent of COVID-19 trade-restrictive

**Figure 5: GVC participation and export performance**



Source: World Bank and WTO data

measures. According to preliminary estimates by the WTO, the trade coverage of trade-facilitating measures still in force (US\$180 billion) remains higher than that of the trade-restrictive measures (US\$106 billion). These trade-facilitating measures, along with strong monetary and fiscal policy support from governments, and the arrival of effective vaccines against COVID-19, have been important factors in the trade recovery. Yet, full recovery remains at risk without greater vaccine roll-out in developing and Least Developed Countries. The quicker global trade can recover, the better the outlook for economic development. Close coordination of health, customs, and any other relevant ministries and agencies involved in the process for licensing and clearing imported vaccine doses, vaccine inputs, and equipment is necessary to expedite access to these critical products.

**Reducing cross-border trade costs would drive a stronger trade recovery especially among developing countries.**

Trade costs, arising from onerous trade procedures at and behind the border and inefficient shipping and logistics services, remain high and result in a doubling of the costs of getting internationally traded goods to market compared to domestically produced goods. Estimates suggest that travel and transport costs account for in general more than one quarter of differences trade costs depending on the sector, while trade policy barriers and regulatory differences

account for at least 10 percent and up to 20 percent of trade costs in all sectors (WTO, 2019). These costs are highest in services, but also higher for agricultural goods than for manufactures in particular in developing economies (World Bank, 2021b; WTO, 2020e). Trade costs associated with non-tariff measures are more than double that of tariffs. In addition, high levels of uncertainty magnify the impact of trade costs on international trade (WTO, 2020b). The gains from tackling trade barriers can be huge. A recent World Bank study on the economic and distributional impacts of the Africa Continental Free Trade Area (AfCFTA) underscores how much could be gained from the elimination of non-tariff barriers and improvements in trade facilitation (World Bank, 2021c). It estimates that two-thirds of the income gains, almost US\$300 billion, expected from the AfCFTA would come from implementing trade facilitation measures. Furthermore, an estimated 30 million people would be lifted out of extreme poverty with a 10 percent increase in wages above the baseline by 2035 with higher wages gains for women and lower-skilled workers.

**Global trade cost savings resulting from full and effective implementation of the WTO Trade Facilitation Agreement could reach up to US\$210 billion per year (Hillberry and Zhang, 2015).** Recovery will also rely on global support to accelerate developing countries'

implementation of the WTO Trade Facilitation Agreement. Critical measures include simplification of processes and procedures; elimination of redundant documents; implementation of automated systems and new technologies to facilitate trade; creation of national single windows; setting up of trade information portals; and strengthening National Trade Facilitation Committees to foster partnerships between the public and private sectors and to enhance border agency coordination. Border agency collaboration, along with enhancing the digitization of procedures, have been crucial in the face of COVID-19 to ensure business continuity and the flow of medical and food products across borders.

***But the pandemic has shone a light on some developing country vulnerabilities that must be addressed in preparation for future shocks***

**Limited economic diversification in many developing and Least Developed Countries has constrained them from being more economically resilient and recovering faster.** Trade diversification makes it more likely that trade plays a beneficial role in building and supporting economic resilience, including through the recovery phase (WTO, 2021b). Although empirical evidence suggests that diversification in the aggregate

(at country-level) has increased only modestly in recent decades, export and import diversification has been found to dampen volatility (Figure 6). closure of borders. With the shift to greater digitization likely to persist, the importance of digitally enabled services will continue to grow during the recovery from COVID-19 and post-recovery. As of June 2021, global services exports had yet to recover to their pre-pandemic levels (Figure 4). An important lesson from COVID-19 is that some exporters in developing countries are not deeply embedded in trade networks and are therefore subject to heightened risk if contracts are suddenly canceled. When the affected sectors dominate exports, there can be economy-wide impacts from canceled orders on exports, jobs, and poverty. For example, at the onset of the pandemic, major apparel brands and retailers based in the EU and USA canceled orders, including those already produced by suppliers in developing countries. For example, in Myanmar about 40 factories had closed by the end of March 2020 and more than 25,000 workers, mostly female, had lost their jobs (The Diplomat, 2020), although the exact number may never be known due to a lack of disaggregated data (ILO, 2021). Similar impacts were experienced in countries such as Bangladesh and Vietnam. Exporting firms in developing countries in general face greater challenges in surviving and this tends to be exacerbated during a crisis. This is a

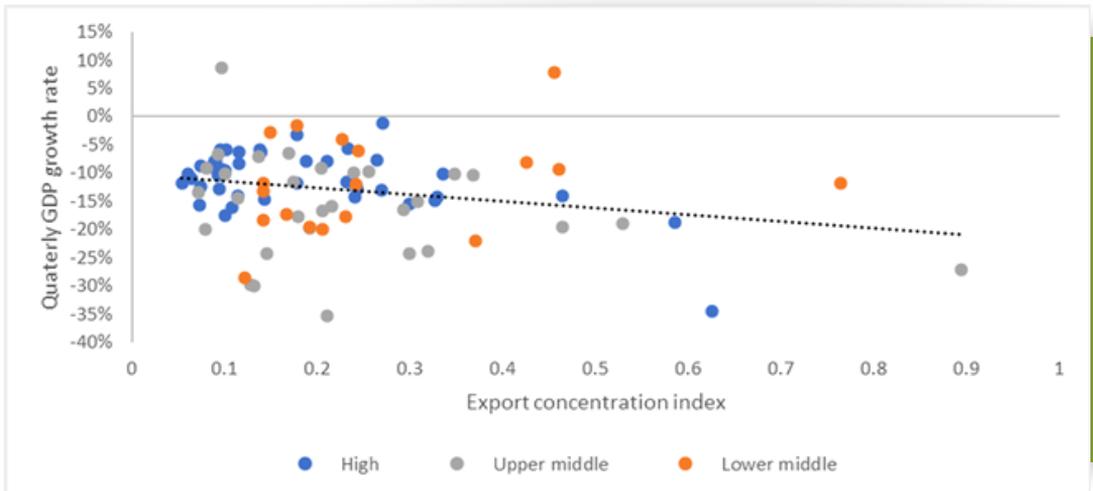
significant factor in limiting the role of trade in driving growth in the long-run. It is particularly so in countries where contracts are poorly specified and there is weak contract enforcement.

**The COVID-19 pandemic has also presented notable challenges for small-scale cross-border traders, in particular in Africa.** The majority of small-scale cross-border traders are women, who rely on ease of cross-border movement and on gathering at local marketplaces where maintaining social distance is difficult. While immediate national health policies have focused on limiting the health and human costs of COVID-19, small-scale traders have been forced to make fundamental changes and adapt their business and market behavior to the new environment. The most direct impacts have resulted from the closing of border crossings for pedestrian traffic, as well as

the closure of border markets. In addition, health inspections and testing requirements have led to delays and burdened traders with new (formal and informal) fees. Also, curfews prevented traders moving products to the border during the cooler hours at night, which led to higher wastage of perishable produce. These impacts have had adverse consequences for regional trade, the income of small-scale traders, and the generally low-income consumers they serve.

**Developing and Least Developed Countries, whose structural trade finance gaps were high even before the pandemic, are experiencing important difficulties in accessing trade credit.** A key element of an enabling trade environment to support the recovery of both imports and exports is the availability of trade finance, such as trade

**Figure 6: Export diversification and quarterly GDP growth rate**



**Source: UNCTAD, World Bank, and WTO data**

Note: The GDP growth rate is defined as the percentage change from Q1 to Q2 2020. The export concentration index shows how exports of individual countries are concentrated on a few products.

related credit, guarantees, or insurance trade. Yet, developing countries, Least Developed Countries (LDCs), and MSMEs continue to be the most affected by the structural shortfall of trade finance. The global trade finance gap, defined as the difference between the amount of trade finance requested by traders and rejected by banks, was estimated at US\$1.5 trillion in developing countries in 2019 (ADB, 2019). Half of the global gap is estimated to be in developing Asia and Africa. While trade financing gaps arise due to a mix of structural and development factors (WTO, 2016), the pandemic has exacerbated pre-existing trade finance gaps in many developing countries. Deteriorating sovereign and private credit risk have led to reduced access to trade finance confirmation lines available from international banks and shortfalls in foreign exchange liquidity (Afreximbank and UNECA, 2021). Multilateral development banks have provided developing countries a mix of direct funding, guarantees, documentary credit confirmation, and cross-currency swaps to local firms, commercial banks, and central banks (IFC, 2021). Addressing protracted trade finance gaps, beyond present support, is also important to accelerate the economic recovery.

**The COVID-19 crisis has also shown that developing countries can become vulnerable to opportunistic actions by trading partners, especially through the use of export restrictions.**

Developing countries, and LDCs in particular, rely on trade for access to essential items such as medicines and food, which renders them especially vulnerable to opportunistic actions by trading partners. The gains from trade through specialization entail that production may become concentrated in a small number of countries (WTO, 2020c). This has become apparent during the pandemic regarding access to essential personal protective equipment (PPE), medicines, and vaccines. This echoes the experience of previous crises, where producing nations have too easily resorted to limits on exports of food at the expense of consumers around the world. The use of export restrictions to limit the access of developing countries to these essential items has constrained them from coping with the pandemic and ultimately from recovering faster. This has in turn increased mistrust of trade and prompted discussion on how to ensure equitable access to essential goods and services. There is clear consensus among economists that export restrictions and precautionary purchases of essential goods by a small number of key countries can lead to rapid rises in global prices and severe shortages in other countries. [4] Furthermore, economic modelling clearly shows that export restrictions magnify the losses incurred by those most adversely affected by a crisis, whether it be a pandemic, a weather-related catastrophe, or both. [5]

[4] See, for example, Falkendal et al. (2021) and Martin and Glauber (2020).

[5] Guan (2021) for example.

**Better information on global markets and more transparency could help avoid panic-driven policy measures and contribute to more informed and coordinated responses that avoid price surges.** To an extent, policy-makers resort to export restrictions based on perceived risks and fears of domestic shortages during a crisis. [6] The decisions are, in turn, influenced by data and information that can shed light on the extent of these risks and the capacity to mitigate them both domestically and through coordination with other countries. Market instability, reflected in substantial price volatility, can be intensified by lack of accurate and timely information on international supply and demand. Providing better information and more transparency can help avoid panic-driven policy measures and related price surges. Indeed, following two world food price crises in 2008/9 and 2010/12, investments by the G20 countries in food information systems have increased the quality of information available to policymakers and may have tempered the use of export restrictions on food during the COVID pandemic. [7]

**The response to the pandemic has shown how a lack of credible information sharing can have adverse consequences.** The experience with critical medical supplies and now vaccines has shown how a lack of credible information sharing between governments, manufacturers, and their

suppliers can lead to hasty decisions by the governments and officials that have adverse consequences for trade and for the global response to the pandemic. For example, better information on available vaccine production capacity globally would have facilitated matches between vaccine developers, potential vaccine producers, and funding agencies. [8] Similarly, for essential protective medical equipment, there appears to have been little effective information on global stocks and production capacities, and little sharing of information as appropriate production facilities were repurposed for the production of sanitizers, masks, and other protective equipment, for example. A lack of transparency also pervades in subsidies, some of which might distort trade flows and prices.

**While better information and effective monitoring are important steps in underpinning confidence, it is necessary to clarify and better discipline the appropriate use of export restrictions during crises.** Export restrictions can provoke responses of trading partners, including retaliation, thus jeopardizing production in complex value chains. Export restrictions on essential goods in times of crises can also create a strong disincentive for firms to produce such goods in normal times, thus making shortages more likely. In the long run, the perceived risk, with geographically concentrated production of essential

[6] They may also be influenced by well-connected domestic actors who will benefit from export restrictions, such as food processors seeking to make larger profits when domestic prices of basic food products decline.

[7] An Agricultural Market Information System (AMIS) was created in 2011 under which (i) G20 governments committed to provide timely and accurate data on food production, consumption, and stocks; (ii) international organizations committed to enhance global food security by monitoring, reporting, and analyzing market conditions and policies and by introducing a global early warning system; (iii) a Rapid Response Forum was established to promote policy coherence and coordination during crisis periods; and (iv) international organizations would support the improvement of national or regional monitoring systems in vulnerable developing countries and regions. AMIS regularly provided timely information on food stocks and production levels throughout the COVID crisis which contributed to awareness and greater dialogue between countries. Despite the imposition of measures on food early in the crisis, many of which were subsequently removed, international agencies view that overall countries adopted "a restrained and reasonable approach to trade restrictions on food during the crisis." (<https://www.weforum.org/agenda/2020/07/how-we-can-build-more-resilient-and-sustainable-food-systems/>)

[8] Evenett et al. (2021) op cit.

products, that producing countries will impose export restrictions in times of crisis may be sufficient to dissuade importing countries from fully liberalizing tariffs on such products and to maintain or develop less efficient domestic capacities for production. The real risks of export restrictions undermine the incentives of importing countries to liberalize. This in turn limits the overall size of the global market for trade and therefore exports, investment, and employment in firms in the large producing countries. Hence, there is a need for global trade policy cooperation on the use of export restrictions in crisis situations, with a view to reducing policy uncertainty and risks associated with global markets in essential products.

**Some countries have already taken steps to deepen cooperation.** For instance, the G20 agreed that “emergency measures designed to tackle COVID-19, if deemed necessary, must be targeted, proportionate, transparent, and temporary, and that they do not create unnecessary barriers to trade or disruption to global supply chains, and are consistent with WTO rules.” Other initiatives have also been put forward. [9]

***Trade will continue to be critical as a driver of poverty reduction although complementary measures are required to distribute the gains from trade more widely***

**While trade brings significant positive economic and social benefits, clearly some have been left behind by globalization and there is abundant evidence that the benefits are not always distributed equitably.** Joint World Bank and WTO studies on the role of trade in ending poverty have demonstrated that the poor face numerous constraints that limit their capacity to benefit from trade and that governments can take steps to address these (World Bank-WTO, 2015, 2018). Poor people face risks that may prevent them from implementing strategies to make the most of trade opportunities, even where these strategies would be beneficial, in terms of higher expected incomes, for example. Identifying and addressing these risks is important to ensure that trade delivers maximum benefits to the poor. For example, the poor may face greater risks if they move from subsistence and informality to specialize in trade-impacted activities. The poor often have no access to risk-mitigation instruments and support that are widely available in developed economies, such as insurance and social security.

**It has also become apparent that the gains from trade may not be evenly spatially distributed and that lack of capital can limit the mobility of the poor to take advantage of new, but distant, opportunities.** In this way, trade may exacerbate regional inequalities in the absence of mobility assistance for poor

[9] For example, New Zealand and Singapore committed to remove customs duties and to refrain from imposing export restrictions on 124 essential goods, including food and healthcare products. In April 2020, 22 WTO Members committed “not to impose agriculture export restrictions”, and agreed that “emergency measures related to agriculture and agri-food products designed to tackle COVID-19 must be targeted, proportionate, transparent, and temporary”. They also committed to “engage in a dialogue to improve our preparedness and responsiveness to regional or international pandemics, including multilateral coordination to limit unjustified agriculture export restrictions, in particular at the WTO”.

families. At the same time, more mobility may further exacerbate regional inequality. While the challenges and risks facing the extreme poor are considerable, the opportunities are great. Pursuing strategies for economic integration in ways that address the challenges faced by the extreme poor will help maximize the gains from trade (World Bank-WTO, 2015).

**Complementary policies are key to ensure that the gains from trade are maximized and shared more evenly and that any adjustment costs are mitigated.** Measures to help lower the costs of labor mobility, and deepen the linkages between tradable and non-tradable sectors, are needed to maximize the benefits of trade and minimize adjustment costs (World Bank, 2021f). It is also important to adopt policies to improve the business environment and support skills development (Bacchetta, Milet, and Monteiro 2019; WTO, 2017).

**Recent analysis shows that trade and trade policy can affect outcomes for women and men differently—in terms of wages, consumption, and welfare, the quality and quantity of jobs available to them, and the risks they face.** While in general trade brings more women into the formal economy and promotes gender parity, creating more job opportunities for women with higher wages and better working conditions, they can also face greater risks.

example, the apparel factory shutdowns that have taken place during the COVID-19 crisis have disproportionately adversely affected women (WTO, 2020a). Women, more than men, lack access to instruments that can protect from these risks. Hence it is essential that efforts are made to improve women's rights as measures are taken to expand trade.

**Trade policy itself is a critical determinant in lowering the trade costs faced by women and female-owned businesses.** Women's market access can be increased by addressing tariff and non-tariff measures that disproportionately hurt women traders and consumers. Improving trade facilitation enables women to trade as safely and easily as men. Expanding access to trade finance empowers women to connect with international markets. Although trade policy is very important, it is often not enough to ensure women can benefit from trading opportunities. A broad range of other policies can increase women's capacity to engage in international trade, including those aimed at improving women's access to higher education, digital technology, finance, information, and transport infrastructure (World Bank-WTO, 2020).

***New technologies are creating trade opportunities, but it is important that low-income countries have the capacities to deploy them.***

**New technologies are having a transformative effect on international trade by powering “digital trade”.** In addition to improving competitiveness and productivity, digital technologies are creating new trade opportunities by giving access to remote and foreign markets to firms of all sizes in any location, and by lowering trade costs and expanding the variety of goods and services that can be traded internationally (World Bank, 2021g).

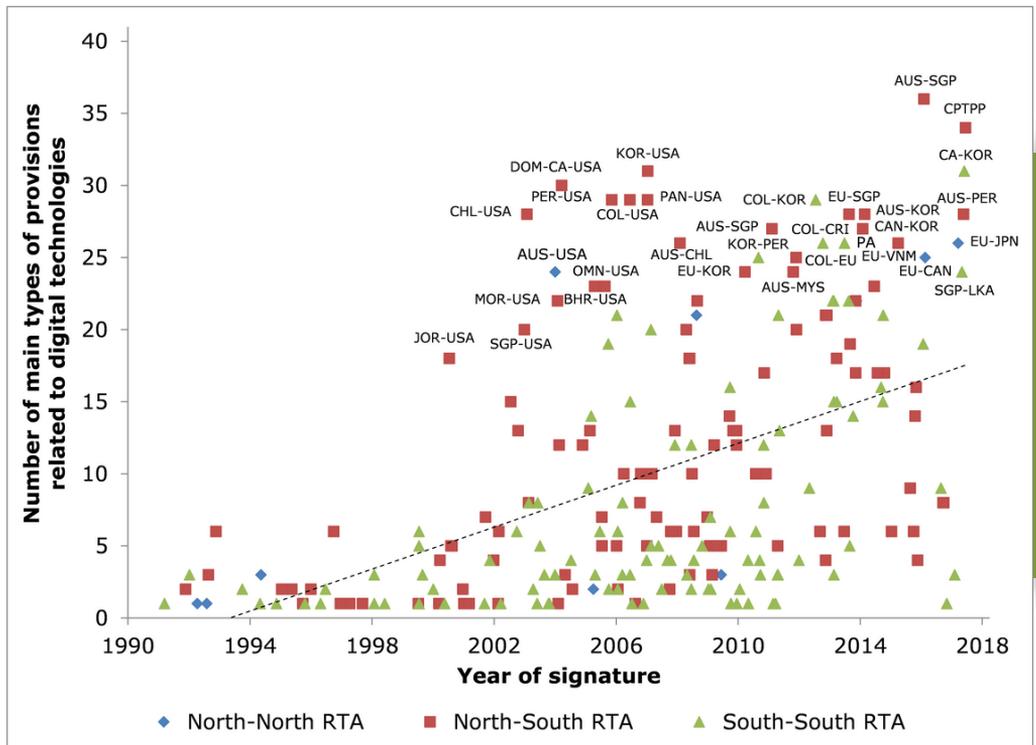
**While global digital trade is currently dominated by high-income countries, developing countries are increasingly engaging in digital trade as exporters of high-value digital services.** For instance, a Bangladeshi firm, Augmedix, offers remote assistance to medical doctors in the USA. These doctors wear smart glasses allowing their Bangladesh-based assistants to “witness” patient consultations and create associated medical records and interact with the doctors in real-time.

**Establishing a conducive environment for digital trade, however, remains a complex endeavor and there are stark differences in access to digital solutions for the poor, women, informal workers, and other vulnerable groups.** The foundations of digital trade rest on a modern telecommunications infrastructure, a favorable business environment, and an educated population. In addition digital trade

requires specific enabling conditions that build those foundations: businesses require specific digital skills and entrepreneurship to engage in digital trade; a sound regulatory framework for digital policies like cross-border data governance and platform regulation; and goods sold across borders though e-commerce need efficient trade facilitation and logistics suited to e-commerce deliveries.

**Global digital trade would also benefit from international rules.** Preferential trade agreements (PTAs) have been at the forefront of global digital governance. Rules on digital trade are growing in both scope and depth, as well as in importance in trade negotiations, both at the regional and bilateral level (Figure 7) (WTO, 2018; Monteiro and Teh, 2017). These provisions range from the applicability of WTO and PTA rules to e-commerce, to the non-discriminatory treatment of like digital products, as well as commitments not to impose custom duties on digital products and to liberalize digital trade in services. Other relatively more recent provisions address the cross-border transfer of information by electronic means, the use and location of computing facilities, and the transfer of and access to software source code. The negotiations related to the WTO Joint Statement Initiative on E-commerce aim to develop global digital trade rules.

Figure 7: Evolution of PTAs with provisions related to digital technologies



Source: WTO (2018), updated and extended from Monteiro and Teh (2017)

Note: Analysis based on 362 regional trade agreements (RTAs). "North" is defined as high-income countries, whereas "South" is defined as middle- and low-income countries according to the World Bank's country classification.

**Trade can contribute to disaster risk reduction and facilitate the adoption and diffusion of the goods, services, and knowledge required for all countries to join the global transition to a low-carbon future.**

Climate change is already impacting trade both through rising temperatures and changing precipitation, that are changing traditional comparative advantages, as well as through the increasing prevalence and greater violence of extreme weather events.

Higher temperatures and extreme weather events, combined with human encroachment on animal habitats, also increase the risk of future pandemics. Developing countries continue to be the most impacted by climate change but also the least able to afford its consequences. Fighting climate change and its consequences are an imperative for development and reducing poverty. Under existing production structures, and in the absence of comprehensive carbon policies, the trade-driven growth needed for the elimination of extreme poverty risks driving increasing emissions, which

would put even greater pressure on the limited carbon space available to achieving the Paris Agreement objectives.

**While trade generates carbon emissions, contributing to climate change, it is also a central part of the solution - by enhancing both mitigation and adaptation.** Adaptation to the changing climate and the shift to a lower-carbon growth trajectory will be key challenges for the countries that are the most vulnerable and have the least resources and capacity to adjust. Indeed, an increasing body of analysis is demonstrating that low-carbon and climate-resilient growth can provide growth, poverty reduction, and human development outcomes that are superior to the current alternative.

**Trade will become increasingly important in limiting the impacts of extreme weather events on afflicted populations.** Imports are critical to offset crisis-induced shortfalls in supply of domestically produced goods and services, including food. Exports can provide an important source of demand during a crisis. Both exports and imports can help sustain economic activities and ultimately maintain jobs and incomes during and after a shock. Results from a stylized numerical model show how important trade is for disaster recovery

and that restrictions on exports during a crisis amplify the adverse economic impacts (Guan, 2021). Policies that lead to higher trade barriers undermine the efforts of other countries battling extreme weather events and/or a pandemic (World Bank, 2021h). Crisis-hit countries are vulnerable to restrictions which limit access to products through trade, such as export restrictions from countries that are less impacted. This is critical because short-term impacts can also have adverse long-term development outcomes. For example, if malnutrition increases during the crisis and children become stunted, as has happened during the COVID-19 pandemic, their long-term development will be jeopardized. These challenges become even greater in poor low-income countries that face the increasing likelihood of recurrent natural disasters.

**Policymakers have not paid much attention to trade measures as a tool for climate policy. However, existing tariff structures and non-tariff barriers are biased toward high carbon-intensive industries, thus implicitly subsidizing CO2 emissions.** [10] If countries were to remove this bias by imposing similar tariffs and NTBs on low and high carbon-intensive industries, global CO2 emissions would fall, while global real income would slightly increase. [11] These changes in

[10] An industry's "dirtiness" is defined by the total CO2 emitted to produce a dollar of output. Shapiro (2020) finds that in most countries tariff and NTB rates are substantially higher on clean than on dirty goods. Tariffs and NTBs differ for clean and dirty industries because industries tend to be well organized but final consumers generally are not. Firms lobby for high protection on their own outputs but low protection on their intermediate inputs. This skewed bias, resulting from trade policy, creates an implicit subsidy for CO2 generation. The analysis finds that this implicit subsidy totals US\$550-\$800 billion per year, significantly higher than documented direct global subsidies to fossil fuel consumption, estimated at about US\$530 billion per year.

[11] The scenario considered by Shapiro (2020) is one in which for each trading partner a single tariff is applied across all sectors equal to the average baseline bilateral tariff.

global CO2 emissions would be of comparable scale to the estimated impacts of some of the world's largest actual or proposed climate change policies. Going further, and eliminating trade barriers on high-technology green sectors would have significant additional payoffs, both in terms of emissions and in terms of poverty rates for developing countries. Results from simulations for the upcoming World Bank report on trade and climate change show that for Bangladesh, for example, a green trade scenario could achieve the removal of 45 MtCO2 (accumulated value) emissions by 2040, equivalent to 53 percent of national emissions in 2019.

**The disconnect and lack of coherence between trade, domestic support, and climate policies is especially notable in agriculture.** Most trade policies continue to distort markets for agricultural outputs much more than for other products. Tariffs on agricultural products remain higher on average than those on non-agricultural goods, with the global average tariff on agricultural products more than 12 percent, compared to around 8 percent for all other goods. Tariffs on agricultural products tend to be higher in developing countries, with the exception of low- and middle income countries in East Asia and Europe. [12] Average tariffs on agricultural products remain above 20 percent in South Asia and the Middle East and North Africa (MENA). In some developing countries,

tariffs on agricultural products remain relatively very high. For example, the average tariff on food products in Turkey is 50 percent, in India it is 33 percent, in Morocco it is 29 percent, and Kenya has an average tariff on agricultural products of 25 percent. However, some developing countries have been able to significantly reduce tariffs on food. In Peru, the average tariff is 2.3 percent, in Chile and Indonesia it is around 6 percent, and it is close to 9 percent in South Africa.

**Trade policies are an element of the overall policy environment affecting the amount of different food products that are produced and where they are produced.** Non-tariff trade measures can also be a major barrier to trade and influence trade and food purchasing decisions. The capacities to define appropriate sanitary and phytosanitary standards and conduct testing and conformity assessments are very weak in many developing countries. This often leads to barriers to trade and ineffectual policies. For example, a recent World Bank study shows that current systems for the regulation of aflatoxins in grains in East Africa entails high costs that limit cross-border trade (Keyser and Sela, 2020). Delays at borders and ports also increase trade costs and cause a significant amount of food to be wasted. [13] These costs and waste are likely to be more important for fruits and vegetables that have a shorter shelf life and are more vulnerable to high

[12] A more nuanced picture emerges when support to farmers in the form of public expenditures – subsidies to output, inputs, or conditional on other variables – is considered. This shows, in general, minimal publicly funded support to farmers in low-income countries, low levels of around 5 percent in middle-income countries, but almost 15 percent on average in high-income countries.

[13] Data on food wasted at borders and ports are generally lacking, however, an official UK estimate suggests that additional paperwork leading to border delays because of Brexit could result in 142,000 tons of food being wasted in the first six months of 2021 (<https://www.independent.co.uk/news/uk/politics/brexit-border-food-waste-fish-seafood-meat-b1794364.html>).

temperatures than other food products. This is particularly likely in developing countries where cold chain logistics services are not widely available and poor border infrastructure offers little protection from high temperatures and rain for food products in transit or held at the border for inspection. Reducing food loss and waste would both lower GHG emissions, since the amount of food consumed could be produced with considerably less resources, and improve food security.

**Trade can support climate change adaptation through the transfer of new techniques and technologies, but access is often constrained by a range of tariff and non-tariff measures.** For many developing countries, trade is a key mechanism for improving access to inputs such as seeds, fertilizers, and machinery, which provide the means to increase yields in the face of rising temperatures and changing patterns of precipitation. Trade also supports adaptation through the transfer of new techniques and technologies, such as new drought-resistant seeds, pesticides for weed control, and knowledge on how to adjust planting practices to a changing climate. However, access, especially for small farmers, is often constrained by a range of tariffs and non-tariff measures. Such barriers also contribute to the gender gap

in agriculture, whereby women farmers achieve lower yields on average than men farmers. Addressing these barriers will be essential to ensure that women farmers do not fall further behind due to constraints in the adaptation process.

**The adoption and deployment of Environmental Goods and Services (EGS), including renewable energy, will be a key pathway for developing countries to decouple economic development from increasing carbon emissions.** The substantive decline in the relative price of tradable investment goods, including environmental technologies, achieved in part through deeper trade integration, has contributed to the rise in real investment rates in machinery and equipment over the past three decades (IMF, 2019). Open and transparent trade policies over the past decades have, for instance, enabled the emergence of a globally integrated market for renewable energy (WTO and UN Environment, 2019). Notably, a GVC has emerged for solar photovoltaic (PV) where silicon, wafers, cells, modules, inverters, mounting systems, combiner boxes, and other solar PV components, along with the machines to manufacture PV cells, modules, and panels, are routinely traded back and forth among countries along tightly integrated value chains. On average, tariffs range from a low of 2.2 percent for PV cells to a high

of 10 percent for PV backsheet (the outermost layer of a PV module). Removing tariffs and non-tariff barriers of EGS will provide further impetus to reach a low-carbon production structure for developing countries.

**Trade is a key channel for the diffusion of environmental technologies.** For example, a country's wind power generation efficiency depends on access to higher quality wind turbines available in international markets. [14] Trade in wind turbines thus provides access to technologies with a level of efficiency that cannot be replicated domestically in importing countries. A well-functioning and robust quality infrastructure system is essential to ensure that trade fully plays its role in the sustainable energy transition, and international standards play a crucial part (WTO-IRENA, 2021). Such systems are generally lacking in low-income and many developing countries. This should be an urgent area of support under the Aid for Trade initiative.

**Reducing tariff and non-tariff barriers for trade in EG would go a long way to help accelerate the low-carbon transition.** While the average tariffs of EG are relatively low in high-income and middle-income countries, higher-income countries apply more non-tariff measures on EG than low and lower-middle income countries (Figure 8). [15] Additional policy efforts to reduce remaining trade barriers and facilitate trade could further enhance supply chains providing EG such as PV,

reduce costs, and accelerate the dissemination of renewable energies. Reduction of barriers to environmental services could complement and maximize the impact of liberalization of EG, facilitating installation and deployment of green technologies.

**There are increasing efforts to implement measures to reduce carbon footprints, yet the design of such schemes faces implementation challenges on how to measure the carbon content of products that may become a barrier to developing countries.** Policymakers and the private sector are increasingly supporting the adoption of measures that will reduce a country's or company's carbon footprint but will also affect trade. These include government schemes to introduce taxes at the border to complement domestic carbon taxes and prevent carbon leakage. Companies in the private sector are also designing and implementing schemes to demonstrate reductions in emissions along their value chains (World Bank, 2021h). There is no easy and commonly accepted way to calculate the carbon footprint of a product arriving at the border. But this is required to tax the embedded carbon, in addition to information on carbon taxes (if any) already levied on the product in the country of production. These schemes face practical implementation problems relating to information on the carbon content of products; the sector coverage;

[14] Garsous and Worack (2021).

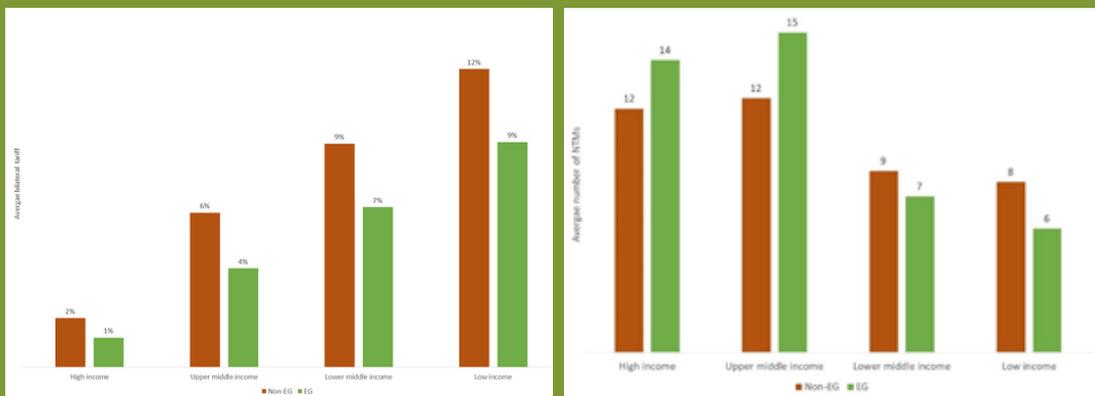
[15] Different definitions of EG have been proposed. Shapiro (2020) defines EG as goods having less direct and indirect carbon emissions in their production process. The analysis discussed here considers goods, such as solar PV and wind turbines, that can help decarbonize the economy.

the scope of carbon measurement; whether product or sector default values are used; and how countries should be allowed to demonstrate carbon competitiveness relative to the benchmark. These are important in determining the impact on trade of the particular scheme and so it is critical that developing country interests are reflected in decisions concerning these factors. Discussions at the multilateral level could also minimize potential trade frictions associated with individual schemes.

### Measures to reduce carbon emissions and meet nationally determined contributions (NDCs) will impact most heavily on countries exporting fossil fuels and carbon-intensive products.

Policy interventions to support climate mitigation objectives will increase the importance of export and output diversification in countries highly reliant on exports of fossil fuels. Opportunities for the decarbonizing of carbon-intensive manufactures, such as metals, concrete, and fertilizers, in response to climate

**Figure 8: Tariffs and non-tariff measures on Environmental Goods by income group, 2019**



**Source: ITC, UNCTAD and WTO data.**

Note: The list of EG, compiled by the WTO Secretariat, represents goods that can help decarbonize the economy (mainly clean and renewable energy and energy efficiency goods). Non-EG corresponds to any other goods.

change measures, will be facilitated by the global spread through trade and FDI of low or no-carbon sources of power and emerging technologies such as clean hydrogen and carbon capture and storage.

**Substantial new opportunities will emerge for developing countries to diversify exports in a low-carbon global economy especially where they are able to identify and verify natural carbon competitiveness.** Countries that are

already heavily involved in GVCs or have the potential to participate in them will see new opportunities for trade. But many developing countries lack appropriate capacities to identify areas of carbon competitiveness and to measure and verify carbon reductions and the environmental characteristics of a good or service. As a result, their exports risk being unfairly taxed at the border and firms excluded from international value chains in the absence of a comprehensive carbon footprint assessment strategy.

## Conclusion

In conclusion, while trade is an important contributor to poverty eradication and economic recovery, there are a range of measures that countries, individually and collectively, with support from the international community, can take to ensure trade facilitates the move to resilient, inclusive, and green development paths. These include:

*Using complementary policies to proactively influence the economic impacts of trade reforms:*

- Reducing distortions and improving the functioning of markets. This includes policies to strengthen a country's investment framework; facilitate linkages especially to smaller firms; and address anti-competitive behavior.
- Lowering trade costs. Policies might include those to increase the capacity and quality of ports and roads; improve access to finance, including trade finance; and simplify and harmonize trade documents and procedures.
- Supporting developing countries to implement best practices in cross-border trade, including the WTO Trade Facilitation Agreement.
- Easing labor market adjustment. Actions could include providing training and relocation support to address constraints to worker mobility and strengthening unemployment insurance.
- Supporting the preparation and sequencing of consultation on trade reforms. This includes using data and tools to understand the potential distributional impacts ex-ante of trade reforms; monitoring implementation; coordinating responses across government; and holding consultations with private sector and other non-governmental stakeholders.

*Addressing market failures to strengthen the role of developing country participation in trade and GVCs:*

- Addressing barriers to trade diversification in terms of suppliers, customers, market destinations, and trading routes. This can ensure that trade plays a beneficial role in building and supporting economic resilience, including during the recovery phase from a crisis.
- Supporting firms to build more resilient GVCs by collecting and sharing information on potential concentration and bottlenecks upstream and on the characteristics and financial viability of downstream buyers.
- Improving the limited access of suppliers in developing countries to trade finance. This can allow firms to develop their capacities to better participate and upgrade in value chains such that when a crisis hits there is greater support from the network.

*Shielding LDCs in particular from export restrictions imposed by key producing countries that limit access to critical food and other essential products:*

- Continuing to enhance efforts to increase information, transparency, and monitoring to duly assess the risks and the capacity to mitigate them, both domestically and internationally. Improved information on global markets and greater transparency and information sharing can help limit panic-driven policy decisions and contribute to more informed and coordinated responses that avoid price surges.
- Increasing cooperation on trade issues that are critical for health and food security including by clarifying - and better disciplining - the appropriate use of export restrictions during crises, to reduce policy uncertainty and the risks associated with global markets in essential products.

*Taking measures to increase the participation of the poor in trade reforms and making trade more inclusive:*

- Reducing trade costs including through steps to improve trade facilitation especially for small-scale traders and streamlining border management. Ongoing WTO negotiations and joint initiatives related to services, investment facilitation, agriculture, electronic commerce, and micro, small, and medium enterprises could create further opportunities for the poor.
- Exploring measures to speed up labor market adjustments, paying particular attention to the linkages between formal and informal sector firms.
- Identifying steps to reduce the risks the poor face from trade.

*Using trade openness in the fight against climate change:*

- Reducing trade restrictions on accessing EGS. Accelerating negotiations on these goods and services at the multilateral level.
- Removing non-tariff barriers and implementing trade facilitation and logistics reforms to reduce delays at borders and along trade routes to reduce food waste and so reduce pressure on land cultivation.
- Working collectively to ensure that international standards developed at the regional and international levels to measure the carbon emissions embodied in products are adapted to the realities of measurement in developing countries.
- Reducing tariffs and NTBs on key agricultural inputs, such as fertilizer, and facilitating access to new technologies for farmers through expedited seed release procedures and easier movement of agricultural specialists to share knowledge on appropriate techniques for farming in a climate-constrained world.
- Exploring collective solutions to help the spread of new green technologies to developing countries.

*Enhancing and reorienting Aid for Trade to support the low-carbon transition:*

- Providing technical assistance and capacity building to low-income countries on carbon measurement techniques and traceability in international value chains.
- Building capacities for quality assurance related to EGS.
- Supporting trade facilitation and trade logistics improvements for perishable agricultural products.

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