WORKING PAPER | ISSUE 22/2025 | 25 SEP 2025

COVID-19'S ECONOMIC IMPACT ON LOW-INCOME COUNTRIES: PREPARING FOR THE NEXT SHOCK

NICLAS POITIERS AND COSTANZA GREPPI-MATURANA

The COVID-19 pandemic sent shockwaves through global supply chains as borders closed, lockdowns went into effect and demand plummeted. This shock was felt particularly by low and lower-middle income countries with economies reliant on a limited set of exports. While some effects of this shock were more short-lived than initially feared, the pandemic nevertheless left a long-lasting mark on many of the countries most affected.

Commodity prices dropped sharply as pandemic measures were enacted. This initial drop was a serious problem for developing countries that relied heavily on exports of those commodities, even after prices rebounded. Amid falling export revenues, their currencies depreciated and they faced problems financing imports of vital goods such as food staples and medicines. This, coupled with increased interest rates, caused issues in servicing debt denominated in foreign currency.

Countries involved in textile manufacturing suffered from a breakdown of the supply chain caused by a drop in demand from advanced economies and closures of textile mills. This had severe consequences for the large labour force involved in textile manufacturing in low-income countries.

Overall, countries with a more diversified export base and a wider set of destination countries weathered the storm better. When designing their near-shoring and friend-shoring strategies to deal with geopolitical risk, advanced economies should take into account the risks faced by low and lower-middle-income countries in term of lack of diversification.

The authors thank Ignacio García-Bercero and Marie-Sophie Lappe for their valuable comments.

This Working Paper has been produced as part of the RETHINK-GSC project, which has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement number 101061123. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA), the granting authority. Neither the European Union nor the granting authority can be held responsible for them.

Niclas Poitiers (niclas.poitiers@bruegel.org) is a Research Fellow at Bruegel
Costanza Greppi-Maturana (costanza.greppi@bruegel.org) is a Research Assistant at Bruegel

Recommended citation:
Poitiers, N. and C. Greppi-Maturana (2025) 'COVID-19's economic impact on low-income countries: preparing for the next shock', *Working Paper* 22/2025, Bruegel

bruegel

1 Introduction

The COVID-19 pandemic triggered one of the largest synchronised economic shocks in modern history. Global output fell sharply in 2020 and trade contracted as lockdowns and mobility restrictions came into force. Border closures and other containment measures disrupted logistics and supply chains, while collapsing demand in advanced economies and volatile commodity prices amplified uncertainty. At the same time, for the first time in the twenty-first century, the trend of global poverty reduction reversed. Extreme poverty increased by 77 million between 2021 and 2019 (Inter-agency Task Force, 2022) and 161 million more people faced hunger in 2020 than in the previous year[1].

The economic impact of the COVID-19 pandemic was not uniform. For many low and middle-income countries (LMICs), reliance on a narrow set of commodities or low-value manufacturing for export meant that trade channels amplified the crisis. Oil exporters saw revenues collapse as prices fell in early 2020. Textile exporters in Asia and Africa faced mass order cancellations and idle factories as European and US demand plummeted. In contrast, more diversified economies such as Vietnam were better able to absorb the shock and rebound more quickly.

Even though global GDP has rebounded in aggregate since the outbreak, the crisis exposed deep structural weaknesses that still shape economic and social outcomes today. Examining the pandemic shock allows us to better understand the position of LMIC countries in global supply chains (GSCs) and how they might be affected by future shocks. The position of LMICs at the onset of the pandemic was that of highly concentrated export structures. Their position in global supply chains reflects traditional trade theory: countries specialise according to factor endowments. For commodity exporters, this translates into forward participation in global value chains, for example Angola with crude petroleum; for light manufacturing exporters it often means backward participation, such as Bangladesh's reliance on imported inputs for textile production.

To examine this vulnerability, we focus on countries that combine both characteristics: those defined by UNCTAD as commodity dependent (Figure 1a)[2], and those with low export diversification measured by the IMF Theil Index, which captures both the range of products exported (extensive margin) and the concentration of export values (intensive margin) (Figure 1b) [3].

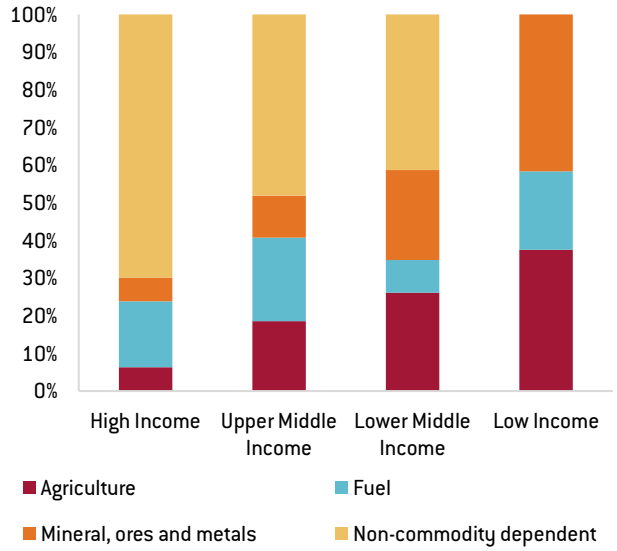
In this paper we take a detailed look at two aspects of trade in developing countries. For the majority of developing countries, energy, metal and mineral and agricultural commodities form the largest part of their external income. We look in the first section at how convulsions in commodity markets impacted them. Then we look at the textile and garment supply chain, which is a key manufacturing export sector in many emerging economies and which is directly dependent on demand in high-income countries. Lastly, we assess the broader macroeconomics and social spillover effects transmitted through these channels from fiscal stress, debt distress and inflationary pressures on food.

---

[1] See FAO website: https://www.fao.org/interactive/state-of-food-security-nutrition/2021/en/.
[2] UNCTAD (2019) defines commodity dependent as having more than 60 percent of merchandise exports derive from commodities.
[3] See the IMF Export Diversification Theil Index. The Theil Index provides an overall measure of export diversification where a higher value corresponds to lower export diversification where a higher values corresponding to lower export diversification, https://www.imf.org/external/datamapper/datasets/SPRLU.

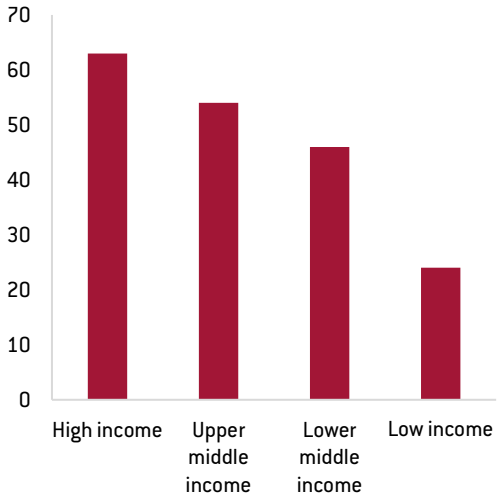
The paper shows how export concentration amplified the effects of the pandemic, underscoring a central policy challenge. Building resilience requires diversifying products and markets, upgrading within value chains into basic manufacturing[4] and strengthening financial and institutional buffers to secure sustainable growth. The report also highlights the asymmetries of the pandemic's economic impact and draws lessons for how vulnerable countries can better withstand shocks in an era of heightened uncertainty[5].

Figure 1a: Share of commodity dependent countries within their own income groups



Source: Bruegel based on UNCTAD.

Figure 1b: Export diversification, Theil Index by income group



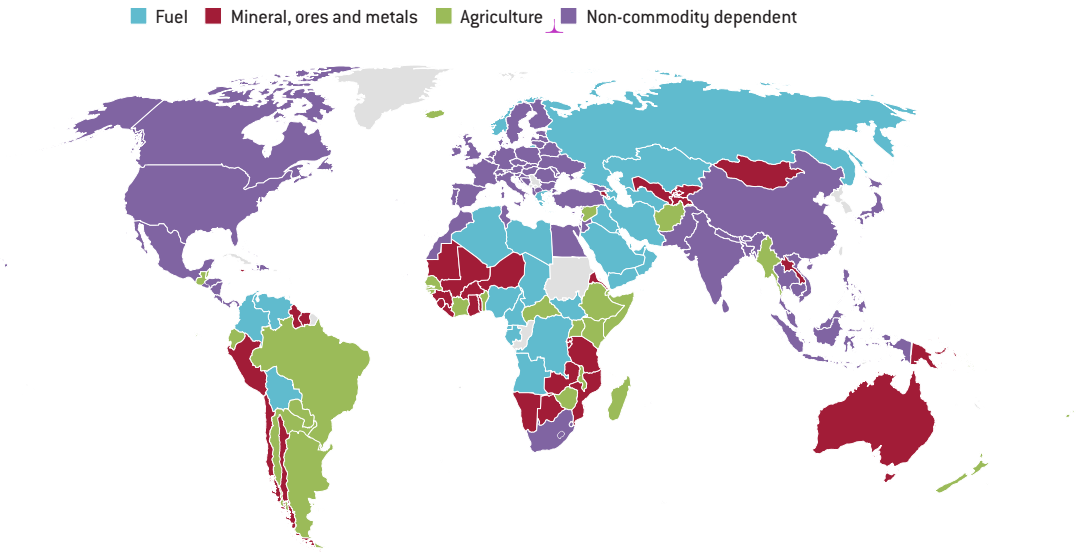
Source: Bruegel based on IMF.

2 A roller coaster ride in commodity markets

Commodity-dependent economies were hit hard by the pandemic, but the impacts differed depending on how commodity earnings were tied into the wider economy. Global commodity prices have seen increased volatility following the outbreak of COVID-19 and then by the war in Ukraine. These swings disproportionately affected developing countries because of their structural vulnerabilities. Roughly two-thirds of developing countries derive more than 60 percent of export earnings from commodities, and in some low-income countries this share exceeds 80 percent (UN, 2023; see Figure 2 for the geography of commodity dependence). Price shocks in advanced economies rapidly transmitted through GSCs to developing countries, particularly those integrated into commodity-linked supply chains. When prices collapsed in early 2020, export income, foreign exchange reserves and government revenues fell sharply. Subsequent rebounds did not offset the fiscal and balance-of-payments stress in many commodity-dependent developing countries, underlining how reliance on a few export sectors magnifies exposure to global crises.

[4] Empirical evidence suggests that within three years of joining a manufacturing GVC, a country is more than 20 percent richer on a *per-capita* basis (World Bank, 2020). We do not discuss this issue further in this paper.
[5] See Economic Policy Uncertainty Index website: http://www.policyuncertainty.com/index.html.

Figure 2: Map of commodity dependence by dominant export product group (per country, percentage)

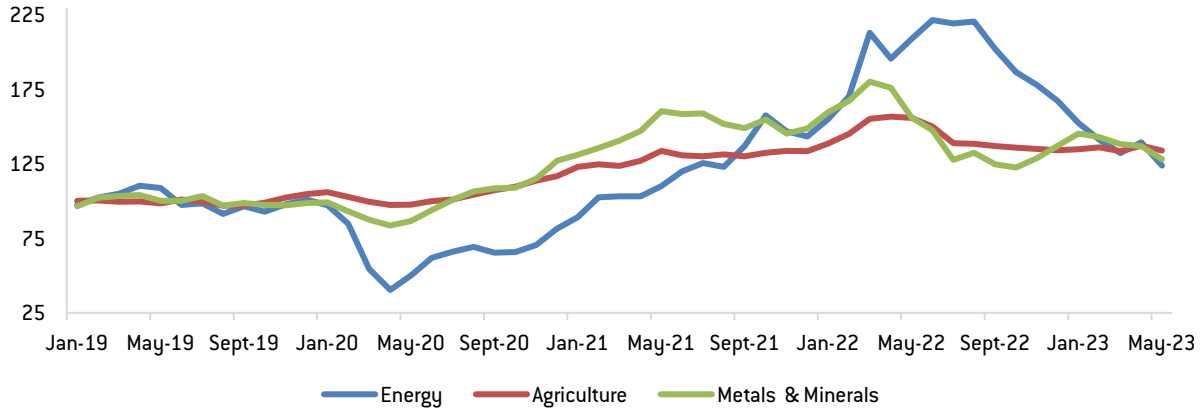


Source: UNCTAD (2019). Note: Data in grey is not available.

2.1 Fiscal revenues: oil and gas exporters

Fuel exporters, such as Nigeria and Angola, suffered the sharp fiscal shocks of the pandemic. In April 2020, energy prices dropped by 58.41 percent (see Figure 3) as lockdowns and restrictions froze global demand, marking the steepest collapse on record. For the first time since 1983, US WTI oil futures turned negative, reflecting the depth of the imbalance between supply and demand (IEA, 2020). With transport accounting for two-thirds of global oil use, travel bans and stay-at-home orders caused demand to decline, while production continued and storage facilities filled (World Bank, 2020).

Figure 3: Evolution of commodity prices



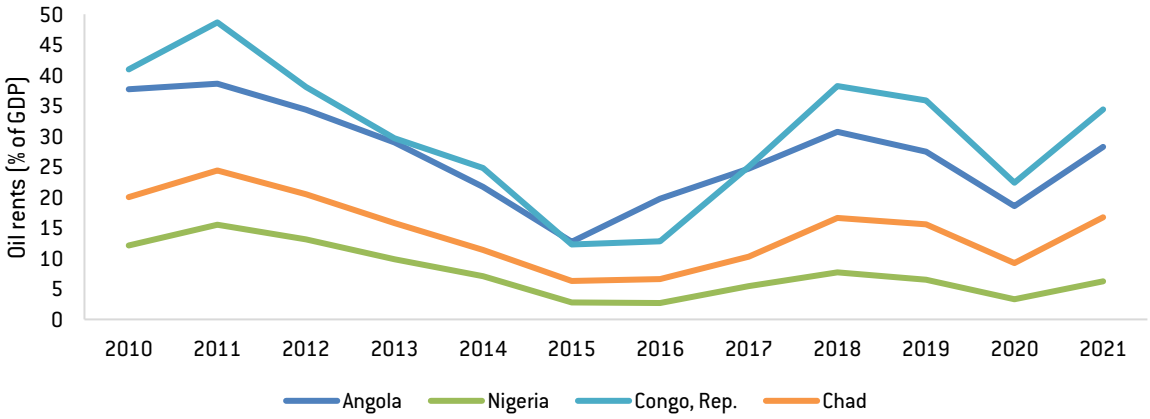
Source: Bruegel based on World Bank Pink Sheet. Notes: Monthly average commodity prices based on nominal US dollars, 2019=100.

In parallel, the oil market was hit by a supply shock. In early March 2020, OPEC and associated oil exporting countries (OPEC+) failed to reach an agreement on continued production restraints. This led to a surge in expected output, exacerbating the market glut from pandemic measures. Markets responded with a 24 percent price drop the day after the breakdown of the OPEC+ negotiations. Though

OPEC+ later agreed to a historic production cut of 9.7 million b/d, the measure failed to reverse the fall in prices. With markets already bracing for a severe demand contraction due to the pandemic, the marginal reduction was insufficient to restore balance or confidence (Kilian and Zhou, 2020). As a result, oil exporting, developing countries such as Nigeria, Angola and Venezuela that had already faced limited fiscal capacity saw a shortfall in earnings (see Box 1).

The simultaneous collapse in demand and supply-side disruptions marked the onset of a global energy crisis, the most severe since the 1970s, with cascading effects on fiscal stability, trade balances, and energy security worldwide (IEA, 2020). Government revenues plummeted as a result, leaving little room for fiscal buffers. Although prices rebounded strongly in 2021-22 (see Figure 4) – fuelled by the post-pandemic recovery and the Russian invasion of Ukraine – fiscal instability persisted. Countries remained exposed to swings in global oil demand and OPEC+ supply decisions, highlighting how reliance on oil rents (Figure 4) can amplify fiscal stress.

Figure 4: Oil rent as a percentage of GDP for low-income and lower middle-income, fuel-dependent countries



Source: Bruegel based on World Bank Development Indicators. Note: Oil rents are the difference between the value of crude oil production at regional prices and total costs of production.

Box 1: The impact of oil prices on Nigeria

Nigeria is Africa's most populous country and one of the largest economies on the continent. The oil sector accounts for over 80 percent of Nigerian exports and 30 percent of banking sector credit, and is responsible for 50 percent of consolidated government revenues (World Bank, 2025). The pandemic and its effect on oil prices was a severe shock to the Nigerian economy. Real GDP, which had grown by 2.2 percent in 2019, fell by 1.8 percent in 2020, marking Nigeria's deepest recession in over two decades. The sudden decrease in demand and prices decreased export receipts, cut public revenues nearly in half compared to 2019 and reduced foreign exchange inflows. Net exports contracted sharply and acted as a major drag on overall GDP. Remittances from the Nigerian diaspora in advanced economies, particularly from the US and UK, also fell as unemployment rose in those economies.

Because the country earns most of its foreign exchange from oil exports, the collapse in oil prices sharply reduced the supply of dollars into the economy. To slow the depletion of international reserves, the Nigerian Central Bank limited access to US dollars at the official exchange rate. Many importers and households turned to the (informal) parallel market. This drove the unofficial rate to well above the official rate, creating a wide exchange-rate premium. The result was a higher cost of imports which, combined with shortages of foreign-supplied goods, fed directly into faster inflation – especially for food and other tradable items.

2.2 External balance: metals and minerals exporters

For mineral exporters such as Zambia, the pandemic shock was felt primarily through external balances. The shutdown of manufacturing industries, business closures and reduced household incomes amid rising unemployment reduced demand for commodity-based manufactured goods. Copper prices plunged by about 16 percent between January and April 2020, while zinc fell by nearly 19 percent (Figure 5a). Iron ore was more resilient, dropping only seven percent (see Figure 5b).

Export earnings in Zambia fell by 15.1 percent compared to 2019 (Bank of Zambia, 2020), despite higher volumes (see Figure 6), reflecting the impact of lower prices. The slump worsened foreign exchange shortages and external financing pressures, contributing to Zambia defaulting on its sovereign debt in late 2020. Logistics disruptions also played a role: South Africa, a major transit hub for Zambia, implemented intermittent lockdowns throughout 2020 which delayed shipments and restricted access to intermediate goods. These disruptions contributed to a 30 percent decline in Zambian imports during the first half of the year, compared to the same period in 2019.

Figure 5a: Global price of copper and zinc

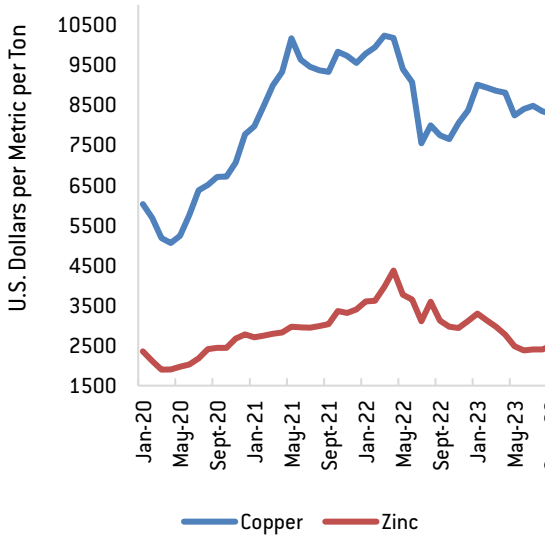
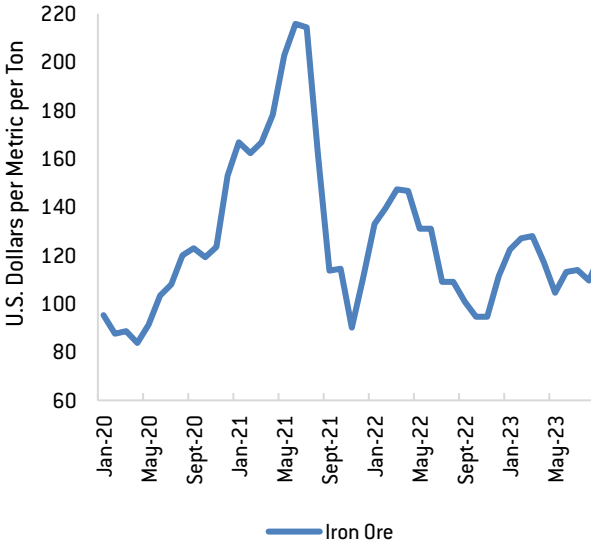


Figure 5b: Global price of iron ore



Source: Bruegel based on FRED. Notes: Copper was retrieved from FRED (PCOPPUSDM) and is in US dollars per tonne. Zinc (PZINCUSDM) in US dollars per tonne. Iron ore (PIORECRUSDM) also in US dollars per tonne.

However, by September 2020, copper and iron ore prices had rebounded, exceeding pre-crisis levels and delivering a rapid terms-of-trade boost for some exporters. By May 2021, copper had surged to its highest level in more than a decade before softening again amid weaker Chinese demand. The rebound was driven both by China's stimulus-led infrastructure push and by supply disruptions. On the demand side, China's rapid recovery was pivotal: infrastructure investments and accelerated industrial activity quickly restored demand for iron ore, copper, and other base metals, with China accounting for roughly half of global consumption (World Bank, 2020). Meanwhile, pandemic-related mine closures and port restrictions in Latin America and Africa curtailed output. In Peru, the temporary closure of the Antamina copper-zinc mine in April–May 2020 contributed to a 23.6 percent year-on-year fall in copper production during the first nine months of that year[6]. With up to 15 percent of copper mines and 20 percent of zinc mines offline globally, constrained supply cushioned the price fall and contributed to the later upswing (Tröster and Küblböck, 2020).

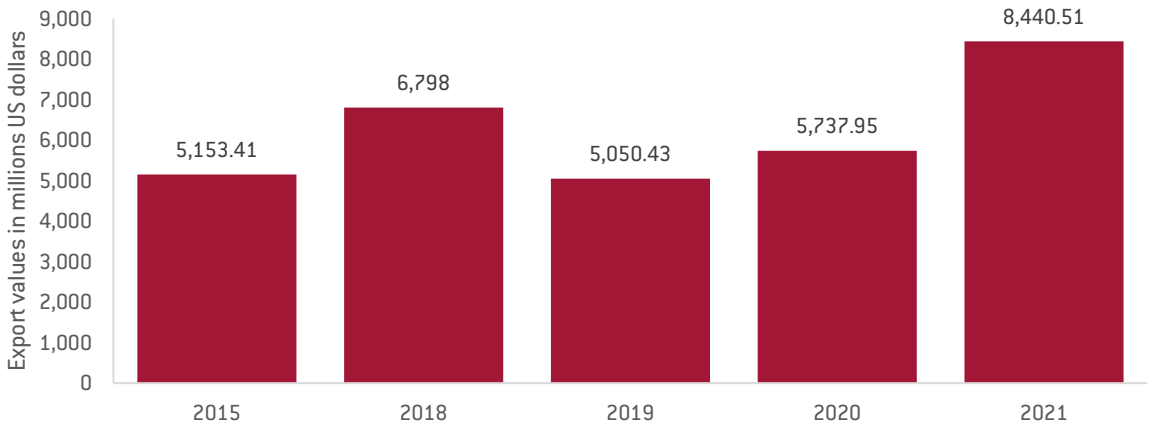
For developing-country exporters, these swings translated into sharp volatility in export revenues and foreign exchange reserves. Copper-dependent economies are especially exposed: copper represents a median of 22 percent of goods exports across base-metal exporters – up to 73 percent in Zambia's case (World Bank, 2025). The mid-2020 rebound in metal and mineral prices marked a rapid shift from severe revenue losses in the first half of the year to improved terms of trade in the second half. However, gains were unevenly distributed; iron-ore exporters with minimal operational disruptions – most notably Australia – were able to capitalize fully on higher prices. In Brazil, COVID-related production outages further tightened global supply, indirectly benefiting other suppliers. Countries experiencing prolonged

[6] GlobalData Energy, 'Global copper production to recover by 5.6% in 2021, after Covid-19 hit output in 2020, says GlobalData', *Mining Technology*, 8 March 2021, https://www.mining-technology.com/marketdata/global-copper-production-to-recover/.

mine closures or export-logistics constraints, particularly in Latin America and Africa, captured less of the upswing as lower export volumes offset some of the price gains.

This illustrates the vulnerability of mineral exporters to terms-of-trade shocks. Price rebounds may lift headline indicators, but without stable production and logistics, higher prices do not automatically translate into stronger fiscal or external accounts.

Figure 6: Export value of copper and articles thereof from Zambia from 2015 to 2021



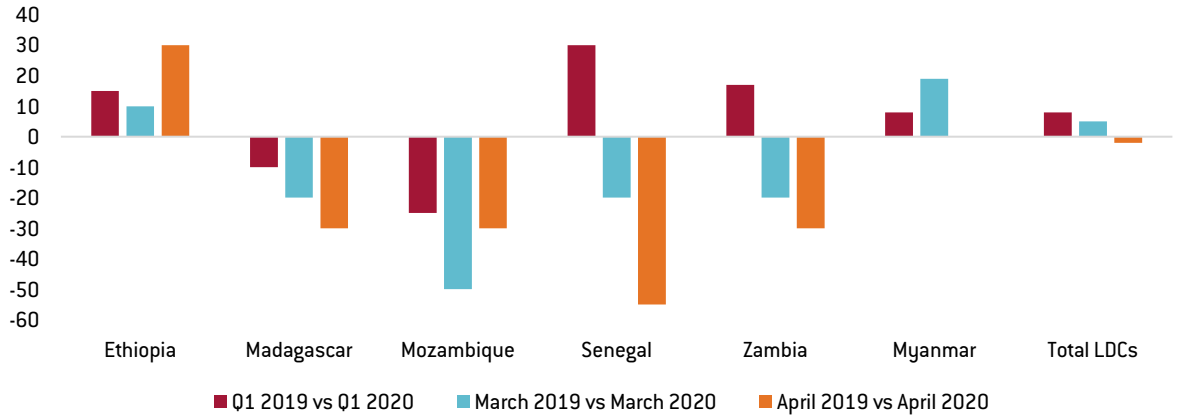
Source: Bruegel based on UN Comtrade; International Economics.

2.3 Employment and household incomes: agricultural exporters

For agricultural exporters, the main transmission channel of the pandemic shock were employment and household incomes. Overall, agriculture proved somewhat more resilient than energy and metals during the pandemic; agricultural trade and prices remained comparatively stable during the early phase of the COVID-19 pandemic (WTO, 2020a). Global agricultural trade fell by around two percent in Q2 2020 and then rebounded significantly in Q3 and Q4, ending the year with net growth (Arita *et al,* 2021). This resilience can be attributed to several factors: the essential nature of food products makes demand relatively inelastic to income fluctuations; the predominance of bulk shipping in the agricultural trade requires relatively little labour and was therefore less affected by workplace disruptions; and there were active government interventions such as stockpiling and social assistance procurement (Schmidhuber *et al*, 2020).

However, regional and country-specific export performance was varied and some products were more affected than others. Figure 7 shows the percentage change in agricultural exports for a selection of LDCs which saw the biggest drops in exports. While Ethiopia and Myanmar notably saw export growth due to constant demand for their key agricultural commodities (notably coffee and oilseeds for Ethiopia and vegetables, corn and rice for Myanmar), other LDCs experienced sharp declines. Mozambique, Madagascar and Senegal registered significant contractions, reflecting their exposure to more perishable or transport-sensitive goods and their higher vulnerability to pandemic-induced trade disruptions.

Figure 7: Percentage change in agricultural exports among selected LDCs



Source: Bruegel based on WTO.

Coffee and cocoa exporters such as Ethiopia, Ghana and Côte d'Ivoire also faced sharp swings in orders and payments. These two commodities experienced short term price increases at the onset of the pandemic, driven by precautionary stockpiling and speculative inventory accumulation. Yet, as lockdowns and recessions took hold in Europe and North America, long-term demand weakened and reversed gains. Major exporters that are highly dependent on these crops experienced volatile earnings as international buyers revised procurement and contract volumes. This volatility was amplified by buyer concentration risk in, for example, cocoa-exporting West Africa. A handful of multinational traders and processors dominate the market, so when these firms reduced orders or tightened payment terms, the income shock was immediate and carried through the entire value chain (Boudreau *et al,* 2023).

Exporters of high-value, perishable goods, such as Ethiopian flowers, Kenyan vegetables and Peruvian fruit suffered steep declines in both volumes and prices as orders were cancelled and passenger air cargo capacity collapsed. Ethiopian's floriculture exports contracted sharply when European wholesale markets shut and freight routes were disrupted (WTO, 2020a; UNCTAD, 2022). Kenya's horticulture faced falling farm gate[7] prices as shipping delays and EU market contraction hit fresh produce supply chains. These shocks exposed deep structural dependencies: reliance on air freight, seasonal labour availability, and demand cycles tied to advanced-economy retail and hospitality sectors (Bloem and Farris, 2022).

3 The impact on textile manufacturers

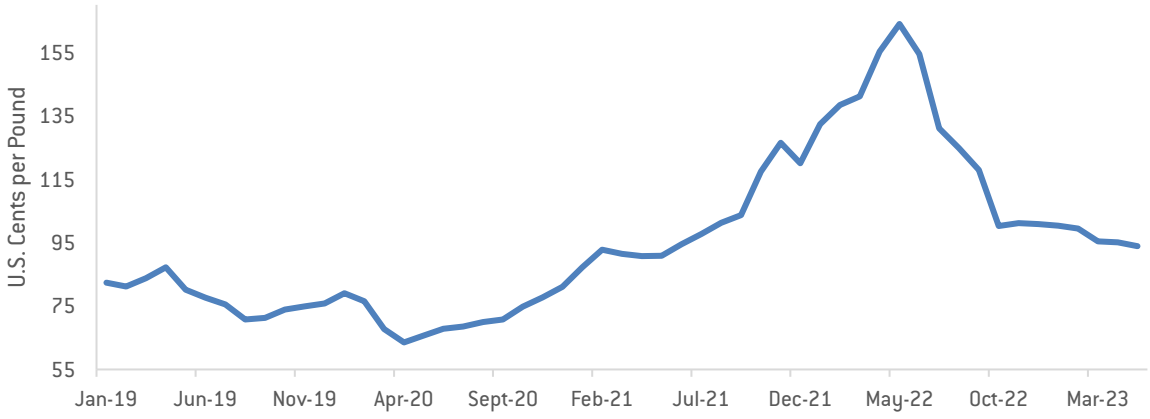
The textile supply chain is important in two ways. First, both its main input (cotton) and the manufacturing of textiles and apparel are important sources for income and employment in low and middle-income countries (LMICs). It is often the dominant industry in these countries, with local livelihoods and export earnings tightly coupled to global apparel demand. Second, they are particularly vulnerable to a collapse in demand from high-income markets, such as the pandemic-induced cotton shock. These disruptions can be transmitted along the value chain to low-cost assembly hubs and commodity exporters, amplifying income and employment losses. During the pandemic, there was first

[7] Farm-gate prices are the prices producers receive for their products at the point of origin, before transport, marketing, and distribution costs are added. They directly affect farmers' incomes and are a key indicator of the profitability of agricultural production.

a supply shock following the closure of Chinese textile factories, limiting the supply of inputs to the garment industry (Meyer *et al*, 2021). Then, a potentially more destructive shock hit the industry: the collapse in demand from advanced economies such as Europe and the US. Lockdowns, economic uncertainty and finally the shift of demand towards durable consumer goods supressed demand for apparel.

Spinning mills and garment factories in West Africa and South Asia curtailed production or closed altogether and cotton prices fell back to levels last seen during the 2008 global financial crisis (WTO, 2021)[8]. Cotton prices fell by 15 percent in 2020 (see Figure 8) and demand decreased by 13 percent as lockdowns shuttered retail outlets in advanced economies (WTO, 2020b)[9]. The economic fallout from this was especially severe for the 'Cotton-4' countries of Benin, Burkina Faso, Chad and Mali, where the cotton sector accounts for 8–12 percent of GDP. Up to 40 percent of export revenue in these countries comes from cotton, and it directly and indirectly supports one-third of employment (WTO, 2021). For these landlocked LDCs, the 2020 downturn translated into a sharp contraction in foreign exchange earnings, worsening fiscal balances, and heightened rural unemployment. In Mali, where cotton directly and indirectly supports over four million people, the government's weakened fiscal position meant it could no longer sustain fertiliser subsidies and the cotton company CMDT, already under financial strain, reduced the farm-gate cotton price by about nine percent. This led to a coordinated boycott by farmers, slashing the national cotton-growing area from approximately 700,000 hectares in previous years to just 165,000 hectares, a reduction of over 75 percent (Dissa *et al*, 2024).

Figure 8: Global price of cotton



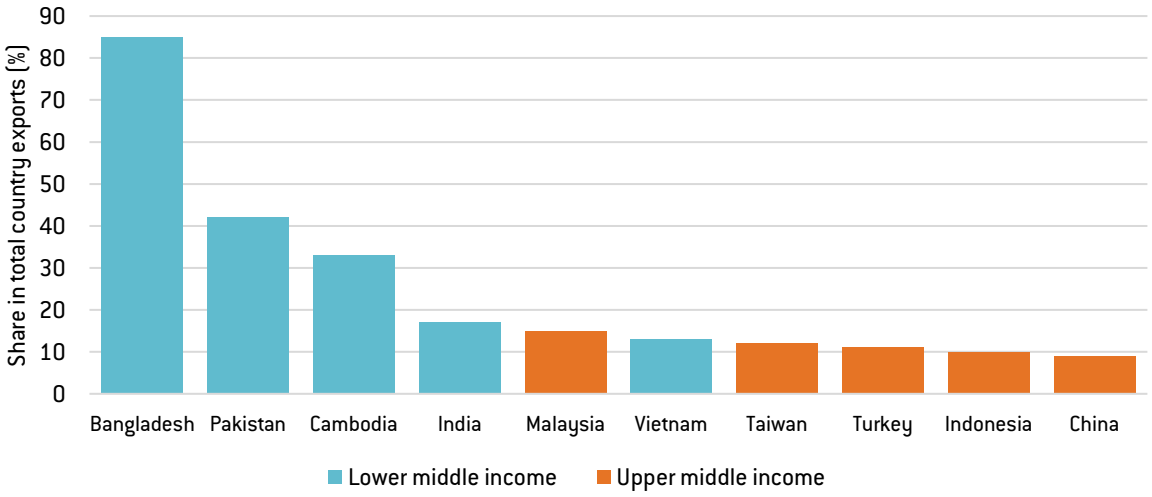
Source: Bruegel based on FRED.

Meanwhile, textile manufacturing is a highly labour-intensive industry that often plays a key role in integrating developing countries into global value chains (see Figure 9 for an overview of the main textile exporters). As it requires high numbers of low-skilled workers and relatively little operating capital, it is an industry that can be established even in otherwise underdeveloped markets. It plays an especially

[8] Cotton prices dropped to about $1.40/kg in April 2020 from $1.56/kg in early 2019, and area planted and production dropped by 18 percent between 2019 and 2020 across a reference group of least-developed countries, with declines of up to minus 79 percent in some least-developed countries (WTO, 2021).
[9] See also the Cotton Outlook website: https://www.cotlook.com/#.

important role for female employment, as women are considered in the context of developing countries to have a comparative advantage in this industry (Meyer *et al,* 2021). Compared to other sectors prevalent in developing countries, such as agriculture, textile manufacturing requires both backward and forward linkages through value chains. Producers import cloth, often from other emerging markets and developing economies (EMDC), then export the finished garments and textiles to both advanced economies and other developing countries and emerging markets.

Figure 9: Top 10 exporting countries of fashion goods (share in global exports %) estimated twenty-foot Equivalent Unit (TEU), 2019



Source: Bruegel based on MDS Transmodal, March 2020. Note: Fashion goods are defined on SITC 2-digit categories including: Textile fibres, Textiles & made-up articles, Clothing & accessories. TEU (twenty-foot Equivalent Unit) is a measure of containerised cargo capacity, representing the volume of a standard 20-foot-long shipping container. Here, it indicates the estimated number of containers used to transport fashion goods exports.

Textile manufacturing is considered a 'buyer-driven' supply chain (Cattaneo *et al,* 2001), where apparel companies from advanced economies play an important role in organising the supply chain. Quality is a key differentiator in the consumer facing product market. While quality is observable, the lack of codifiable quality standards means that the industry relies on relationship dynamics to organise its value chain which makes disruptions of individual buyer-seller relationships more destructive than in other markets (Boudreau *et al*, 2023). For textile manufacturing-based economies such as Vietnam and Bangladesh, the crisis manifested itself through cancelled buyer contracts, idle factory capacity and shortages of imported intermediate inputs (ILO, 2020). In Bangladesh, exports to Europe and the US account for 6.1 percent of GDP and 2.7 percent of GDP respectively (See Box 2), and around 95 percent of Bangladesh's added value in exports to North America and Europe are textiles (Pahl *et al*, 2022). As global demand collapsed, there was no domestic buffer that could have mitigated the effect on domestic manufacturing.

Box 2: Bangladesh and Vietnam offer two contrasting cases of how COVID-19 shocks travelled through global value chains.

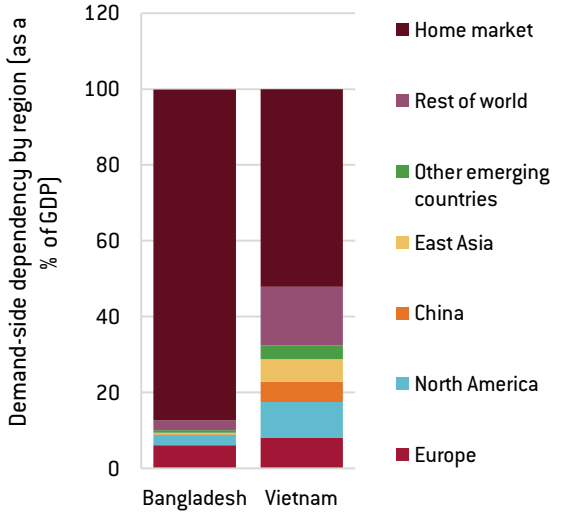
The pandemic exposed how export concentration and product concentration can amplify shocks through global value chains.

Bangladesh is highly exposed to foreign demand but poorly diversified. Around 6.1 percent of GDP depends on European and 2.7 percent on North America demand, almost entirely in textiles (Figure 11). This extreme reliance meant that when orders from Europe were cancelled, demand shocks translated into GDP losses of up to -4.5 percent. On the supply side, Bangladesh's vulnerability was minimal: only 0.6 percent of GDP was linked to European inputs, 0.4 percent to China, and 0.1 percent to North America. Supply bottlenecks in upstream hubs, therefore, had little effect (Pahl *et al*, 2022).

Vietnam, by contrast, is much more diversified across economic sectors and markets (Figure 10a, b). Electronics, food products and garments all contribute significantly to exports. Diversification reduced exposure to any single demand source, but Vietnam's deeper GSC integration exposed it to supply-side risks. Input bottlenecks from China and Europe produced GDP losses of about -2.2 to -2.3 percent, particularly in electronics and machinery (Pahl *et al*, 2022).

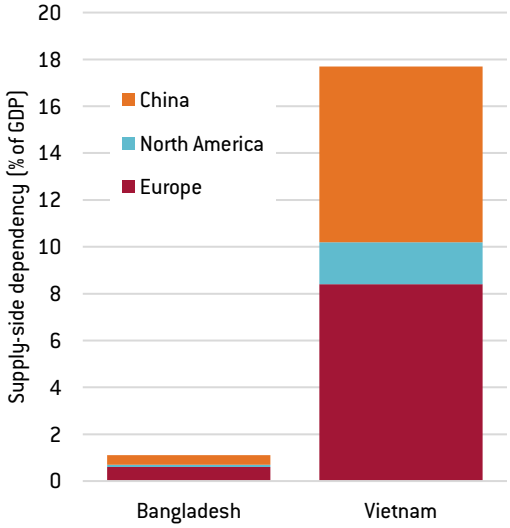
The comparison highlights a broader lesson: economies concentrated in a single sector, whether garments, oil or copper, face disproportionate risks when global demand contracts. Countries with broader export mixes, such as Vietnam, are better positioned to absorb shocks, though they remain vulnerable to systemic supply chain disruptions.

Figure 10a: Bangladesh vs Vietnam: share of GDP linked to external demand



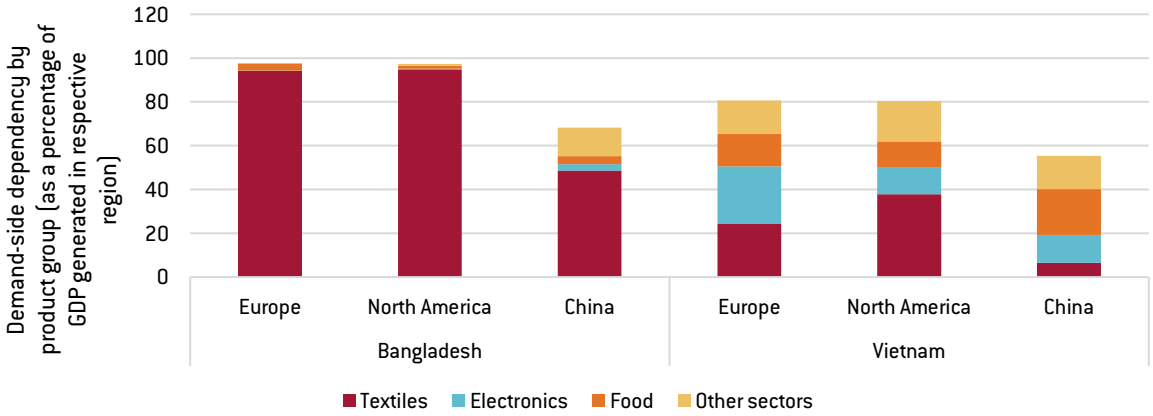
Source: Pahl *et al* (2022).
Notes: Calculated by mapping each developing country's domestic value-added that is ultimately absorbed in final demand of foreign regions. This follows the Johnson and Noguera (2017) value-added exports approach, implemented using global input–output tables (EORA/WIOD).

Figure 10b: Bangladesh vs Vietnam: share of GDP linked to external supply hubs



Source: Pahl *et al* (2022).
Notes: Derived from value-added generated in developing countries that depends on intermediate inputs sourced from the three main hubs. Using input–output linkages (Los, Timmer & de Vries, 2015 method), they trace foreign upstream contributions embodied in domestic GDP.

Figure 11: Sectoral dependencies: share of GDP linked to foreign final demand



Source: Pahl *et al* (2022). Notes: Based on sectoral breakdown of domestic value-added absorbed in foreign final demand. Using the EORA ICIO framework, they allocate value-added by ISIC sectors to destination hubs. Reported as a percent of national GDP, disaggregated by sectors such as textiles, agriculture, mining, etc.

4 Fiscal burdens and social impacts

Low and middle-income countries (LMICs) were resilient in the immediate aftermath of the COVID-19 crisis, with their combined gross national income reaching about $36 trillion in 2023 and growth projected at around four percent in 2025 and 2026[10]. Beneath this resilience, however, lie significant vulnerabilities. Pandemic-era borrowing left LMICs with heavier debt burdens, while rising trade protectionism makes the outlook less certain. The IMF has warned that sustained restrictions on global trade could reduce world output by as much as seven percent in the long run, a particularly acute risk for LMICs that rely on open markets for exports, employment and inclusive growth.

For countries already carrying higher debt loads, in a context in which public debt rose from roughly 26 percent of GNI in 2019 to 28 percent in 2020, any slowdown in trade directly threatens their capacity to service debt obligations and sustain development spending. The trend is already visible, with the United States withdrawing from the African Growth and Opportunity Act[11], and imposing steep tariff on African exports such as textiles and apparel[12]. For economies with dominant forward linkages into GSCs (eg exporting raw materials into downstream production abroad) the collapse in commodity prices during the early phase of the pandemic was particularly destructive. The fall in energy prices compressed fiscal revenues, widened current account deficits and tightened financing conditions; this aggravated debt sustainability risks in already vulnerable sovereigns (IMF, 2020). Price volatility in metals and agricultural commodities added further uncertainty to budget planning and investment decisions (UNCTAD, 2023).

Countries with backward and forward GSC linkages that import intermediate goods to produce and export final products, faced disruptions via different channels. Disruptions to shipping, port operations and

[10] IMF, 'World Economic Outlook Update, Global Economy: Tenuous Resilience amid Persistent Uncertainty', July 2025, https://www.imf.org/en/Publications/WEO/Issues/2025/07/29/world-economic-outlook-update-july-2025

[11] Nqobile Dludla and Lovasoa Rabary, 'Steep US tariffs on Africa signal end of trade deal meant to boost development', *Reuters,* 3 April 2025, https://www.reuters.com/world/steep-us-tariffs-africa-signal-end-trade-deal-meant-boost-development-2025-04-03.

[12] Sam Fleming and Joseph Cotterill, 'Trade wars to weigh on two-thirds of developing countries, World Bank warns', *Financial Times*, 10 June 2025, https://www.ft.com/content/70fc473d-79b4-4e75-bd8f-9fa721690d02.

manufacturing hubs delayed or halted input deliveries. Utilising 'just-in-time' inventory systems, stockpiles were rapidly depleted, forcing synchronised production stops. The inability to substitute foreign inputs with domestic ones in the short-run amplified output losses (World Bank, 2022). At the same time, scarcity drove up input and freight costs, further eroding margins for export-oriented firms (IMF, 2020). For final-goods exporters, domestic lockdown measures constrained labour supply and industrial output. In some regions, most notably parts of East and Southeast Asia, regional trade linkages and faster adaptation in logistics allowed for a quicker rebound, cushioning the shock to exports (IMF, 2020). Elsewhere, the collapse in external demand from major hubs cascaded through supplier networks leading to order cancellations and idle capacity (World Bank, 2022).

4.1 Terms of trade, fiscal revenues and external balances

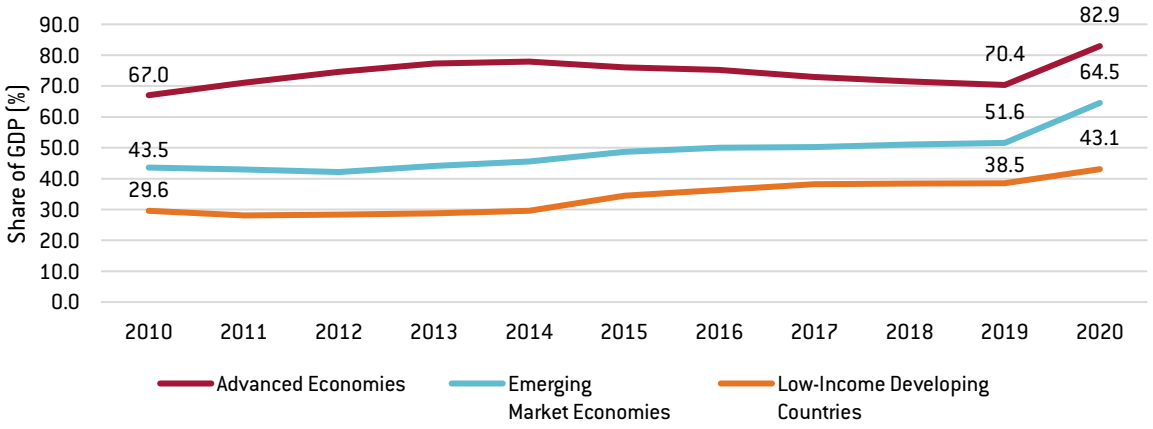
Reduced exports had significant implications for the terms of trade and fiscal revenues of developing countries when public spending had been ramped up to support the pandemic response. Collapsing commodity prices weakened the trade balance of commodity-dependent developing countries (UNCTAD, 2023), such as cocoa-exporting Côte d'Ivoire, where falling export receipts coincided with stable or rising costs for imported staples. This created adverse terms-of-trade shocks, with the value of exports falling relative to the cost of imports (World Bank, 2022; IMF, 2020). Lower export receipts meant reduced foreign currency inflows, putting pressure on foreign exchange reserves and reducing the ability of central banks to supply foreign currency for essential imports including food, fuel and medicines. Import-dependent countries in North Africa and the Middle East saw continuing high or rising food and fuel import costs because of currency depreciation, despite falling global prices (IMF, 2020). The deterioration in external accounts undermined investor confidence, prompting capital outflows. As non-resident investors sold local assets, foreign exchange demand rose while the supply contracted, accelerating currency depreciation (World Bank, 2022).

Depreciation, in turn, increased the local currency cost of servicing external debt, particularly in countries with a high share of liabilities denominated in foreign currency. Even before the pandemic, public debt ratios in emerging markets and developing economies (EMDEs) were on an upward trajectory (the so-called 'fourth wave of debt accumulation'), driven by persistent fiscal deficits, expanding external borrowing and greater reliance on market-based financing. Structural changes in the creditor mix had increased refinancing and cost risks[13]. By 2019, about half of low-income countries were already in or at a high risk of debt distress (World Bank, 2022). The pandemic triggered a surge in debt across EMDEs, and their average debt rose in 2020 from 38.5 to 43.1 percent of GDP (see Figure 12). The debt-to-export ratio, which compares total debt stock to export income, and is an important indicator of external debt sustainability, increased for all LMICs (see Figure 13). Weaker currencies and higher perceived sovereign risk drove up sovereign spreads, raising borrowing costs for these countries. As interest rates increased, some EMDEs were pushed into a liquidity crisis; those already near debt distress before the pandemic faced mounting solvency problems. This forced greater reliance on official

[13] Since 2010, the share of low-income country public and publicly guaranteed external debt held by private and non-Paris Club official creditors has nearly doubled to 38 percent, while reliance on domestic debt has also grown sharply, particularly during the pandemic (IMF, 2025). This raised refinancing and cost risks, as these creditors often have shorter maturities and higher interest rates than concessional lenders.

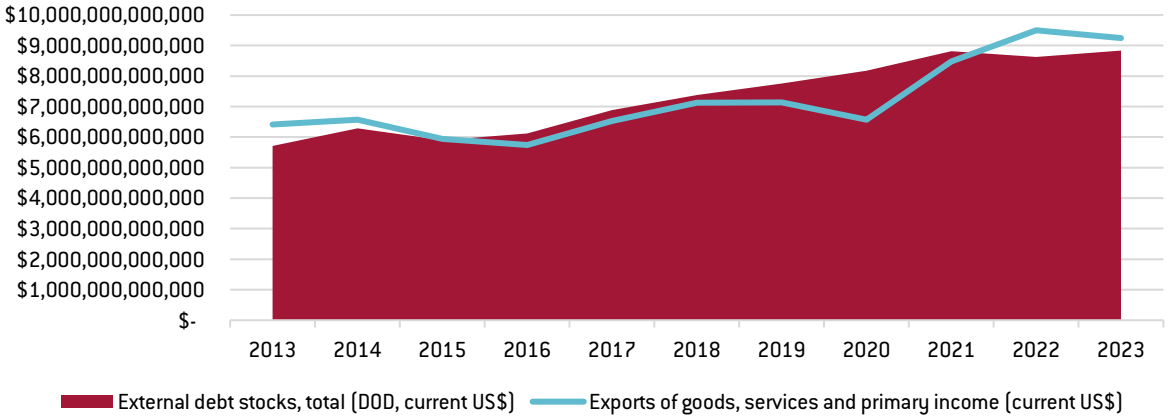
lenders such as multilateral institutions (eg IMF, World Bank) and bilateral creditors, including both Paris Club and non-Paris Club members (World Bank, 2022).

Figure 12: General government gross debt by income group



Source: Bruegel based on IMF. Note: The figure shows the general government debt stock as a share of gross domestic product (GDP) averaged for each income group, for a selected number of countries available in the dataset, IMF classification for 2024.

Figure 13: Exports of goods, services and primary income; and total debt stock ($) for low and middle-income countries

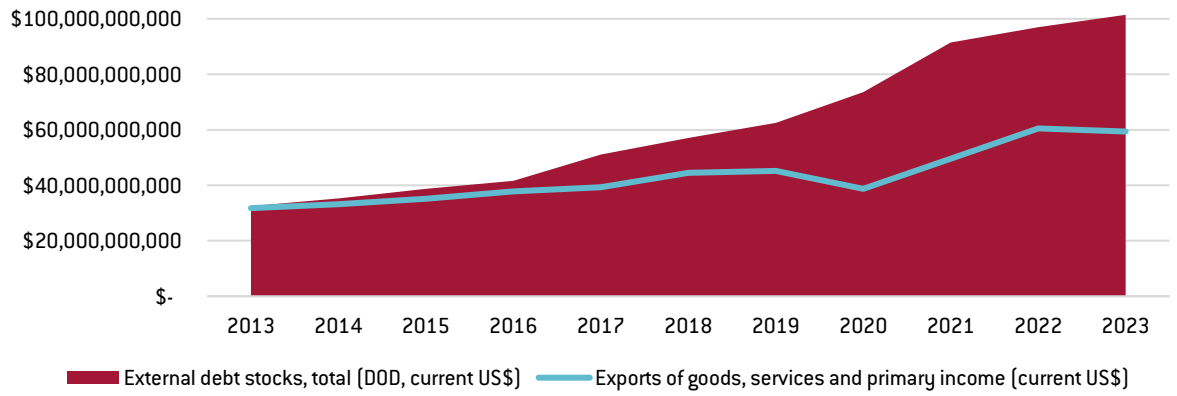


Source: Bruegel based on World Bank International Debt Statistics.

The post-pandemic picture for the LMICs is mixed in terms of both exports and debt. Larger economies with diversified export structures have seen a rebound in export earnings and market access. India and Vietnam have been two of the biggest drivers of the post pandemic export recovery. India's exports expanded by 57 percent between 2020 and 2023, from $507 billion to $811 billion, which helped keep its debt-to-export ratio at 80 percent despite a sharp increase in external debt. Vietnam, though carrying a higher stock of external debt, benefits from a much broader export base. Its debt-to-export ratio fell by nine percentage points to 37 percent in 2023, even as it increased borrowing significantly (see Figure 15). Others, especially those with concentrated export baskets, continue to face heightened risks from elevated debt burdens and volatile global demand.

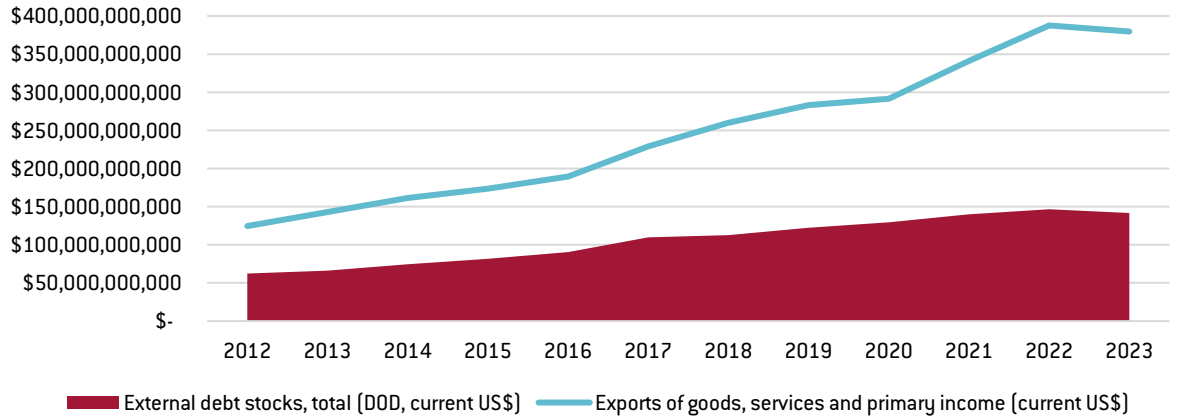
Bangladesh, for example, is heavily reliant on exports of mostly textile products[14], saw exports drop by 28 percent in 2020. Its total debt outstanding increased from $74 billion in 2019 to $101 billion in 2023 (see Figure 14). Bangladesh's debt-to-export ratio spiked to 190 percent in 2020. Although the ratio has eased since, it remained elevated at 171 percent in 2023, well above its pre-pandemic level of 138 percent. The pandemic has thus turned pre-existing vulnerabilities into acute sovereign risk episodes, leaving many developing countries with high-cost debt, large refinancing needs and limited fiscal space to absorb future shocks.

Figure 14: Bangladesh, external debt stocks, total



Source: Bruegel based on World Bank International Debt Statistics.

Figure 15: Vietnam, external debt stocks, total



Source: Bruegel based on World Bank International Debt Statistics.

4.2 Foreign Direct Investment

[14] Anthony Tin Yu To, 'Navigating debt and trade: Data show persistent debt challenges for developing countries amid uncertain trade prospects', *Data Blog*, 7 August 2025, World Bank, https://blogs.worldbank.org/en/opendata/navigating-debt-and-trade--data-show-persistent-debt-challenges-.

Foreign Direct Investment (FDI) is an important channel for economic growth in developing countries through the knowledge dissemination it brings from advanced economies. However, the pandemic brought a collapse of FDI into EMDCs as investors sought out more stable markets. FDI fell globally in 2020 by around 25 percent[15], with large regional discrepancies among developing countries. New greenfield projects in developing countries declined by 42 percent (UNCTAD, 2021). While some East Asia countries saw FDI flows to their region increase, Africa saw a drop of about 16 percent. Latin America was hit especially hard, with some Latin American countries seeing an FDI drop by more than 50 percent. Global FDI, including to developing countries, recovered in 2021; however, economic uncertainty continues to be a suppressing factor for FDI.

The pandemic has led to an increased sensitivity in advanced economies to their own vulnerabilities to supply chain disruptions. This has led to efforts to reshape GSCs to reduce geopolitical risks. Governments are increasingly 're-shoring' or 'friend-shoring' production, while multinational enterprises seek to reduce risks by running separate supply chains in different regions[16]. This offers some opportunities for FDI intended to diversify supply chains, but also significant risks in terms of reducing the level of diversification of developing countries. While advanced economies generally have a very different set of comparative advantages than LDCs, and thus the risks of losing markets due to reshoring seems limited, attempts at 'block building' by governments through friend-shoring could lead to an even higher dependence on a less-diverse set of countries.

4.3 Labour markets and the private sector

The COVID-19 shock revealed the tight interlinkages between households, small firms, the financial sector, and governments in emerging and developing economies (World Bank, 2021). Lockdowns, mobility restrictions, and collapsing external demand triggered widespread job losses in export-oriented sectors. Sectors linked to GVCs, such as automotive components and apparel, were more exposed due to simultaneous supply and demand shocks (World Bank, 2020). Labour-intensive manufacturing sectors, such as textiles and garments, were particularly affected (Anner, 2020).

These sectors employ large numbers of women and low-skilled workers, who saw wage cuts, furloughs, and non-renewal of temporary contracts, exacerbating gender inequalities (ILO, 2020). In Sub-Saharan Africa, lockdown measures also reduced seasonal and casual labour demand in agriculture, affecting migrant and informal workers who depend on cross-border movement for employment.

Income losses among households, particularly those dependent on informal, low-wage employment, reduced consumption and weakened the customer base of local businesses. Micro, small and medium-sized enterprises, accounting for the majority of employment in EMDEs faced acute liquidity and solvency pressures with limited access to credit to bridge cash-flow gaps. Surveys in multiple regions indicated that more than half of SMEs experienced revenue declines of over 50 percent during the initial months of the pandemic. In many low-income economies, formal SME support was minimal due to constrained fiscal space, and informal enterprises were ineligible for relief measures. Without sufficient

[15] Almost a third of the drop in global FDI occurred in the Netherlands and can be attributed to the liquidation of holding companies, while changes in financial flows of Chinese companies in Hong Kong distort the figures for FDI in Asia; see UNCTAD (2021).

[16] See European Commission State of the Union website: https://single-market-economy.ec.europa.eu/events/navigating-supply-chain-disruptions-2024-10-03_en.

buffers, firms were more likely to temporarily or permanently close, resulting in further job losses and deepening household income insecurity.

This deterioration in household and business balance sheets fed back into the financial system. Non-performing loans increased, especially among small borrowers, limiting banks' willingness and capacity to extend new credit. Households experienced sharp declines in labour income, remittances, and non-farm business earnings. The financial stress of households and firms increased loan default risks, which weakened the banking sector's capacity to provide credit. At the same time, deteriorating public finances, due to revenue losses and higher debt service, reduced governments' ability to support households and firms (IMF, 2020; World Bank, 2021). Consumption-smoothing mechanisms were weak: many households depleted savings or sold productive assets to cope with income losses, increasing vulnerability to future shocks.

Food insecurity rose markedly as supply chain disruptions and import dependence drove up local prices, eroding purchasing power. In Mali, for example, reduced cotton prices and input subsidies led to a near-collapse in cotton planting in 2020–21, with knock-on effects on household access to fertilisers for food crops (Dissa *et al*, 2024). The poorest households, spending a relatively high share of their income on food, were the most affected.

4.4 Food security

The COVID-19 pandemic amplified pre-existing vulnerabilities in food security across many developing economies. Macroeconomic spillovers, most notably currency depreciation driven by capital outflows and weaker export earnings, raised the local-currency cost of imported staples. In countries where food inflation was already high before the pandemic, price increases accelerated in 2020–21, often outpacing household income growth. This erosion of purchasing power worsened food insecurity, especially in poorer populations (IMF, 2020).

According to Béne *et al* (2021), the main challenge for low-income countries was the affordability of food, rather than its availability . Evidence from 62 countries indicates that the main disruption came through declines in household income and purchasing power, following job losses, business closures, and mobility restrictions. This was compounded by temporary interruptions to physical access to markets, particularly during the early lockdowns, which forced consumers to shift from nearby informal outlets to more expensive or less convenient suppliers. Household survey data illustrate that in Addis Ababa, 60 percent of households reported income loss in mid-2020; in Myanmar, 80 percent; in Nigeria, 75 percent. Béne *et al* (2021) show that reduced incomes translated directly into poorer diets: in India, over 60 percent of farming households reported dietary disruptions, with half cutting consumption of fruit and animal products; in Mexico, food security in households with children fell from 39 percent in 2018 to 25 percent by mid-2020. These dietary impacts were often more severe for women and urban residents. Similar patterns emerged in Mali and Nigeria, where moderate food insecurity, as measured by the Food Insecurity Experience Scale (FIES), rose sharply, particularly in urban areas facing stricter lockdowns and higher COVID-19 case counts (Bloem and Farris, 2022).

For producers, the pandemic disrupted agricultural value chains, raising input costs, depressing farmgate prices[17] and reducing profitability. In some regions, agricultural input suppliers lost up to 75 percent of their business, and smallholder incomes fell steeply (Béné *et al*, 2021; FAO, 2021). Labour shortages, transport restrictions, and declining demand from downstream buyers further undermined production and marketing. In Uganda, rural households responded to lost non-farm income by cutting food expenditures per adult equivalent by about 40 percent, drawing on savings, and borrowing more, but avoided selling productive assets to preserve future resilience (Bloem and Farris, 2022). In Mali, reduced cotton prices and input subsidies led to a near-collapse in cotton planting in 2020–21, with knock-on effects on household access to fertilisers for food crops (Dissa *et al*, 2024).

Some commodity-dependent economies faced a dual shock. For example, Côte d'Ivoire, a major cocoa exporter but significant rice importer, suffered declining export earnings while facing stable or rising grain import costs. This combination eroded terms of trade, intensified balance of payments pressures, and heightened food security risks (IMF, 2020). The resulting squeeze in household budgets in both rural and urban areas has long-term implications for human capital accumulation, poverty reduction and growth prospects (World Bank, 2022).

Importantly, the pandemic's impact was not uniform. While urban consumers, as net buyers of food, were generally more vulnerable to price spikes and supply chain disruptions, rural producers faced their own constraints, particularly in drought-prone or conflict-affected areas. Over the longer term, evidence from Burkina Faso, Ethiopia, Malawi, and Nigeria shows that, while the initial spike in 2020 in food insecurity eased somewhat, levels remained above pre-pandemic baselines one year later (Rudin-Rush *et al*, 2022; Bloem and Farris, 2022). This persistence underscores the risk of lasting, scarring effects on nutrition, human capital, and poverty trajectories in emerging and developing economies.

5 Conclusion

The pandemic-driven disruptions of trade and supply chains were especially impactful for those developing countries that are dependent on external demand for a limited set of products. While advanced economies experienced this shock primarily as shortages of certain products and industrial inputs, it had more wide-ranging and serious effects on more vulnerable developing countries. Commodity-reliant countries saw the price of their main export – and key source of income – collapse, while countries engaged in low value-added supply chains, such as textiles, suffered from suppressed demand in advanced economies. Import reliance on food and fuel and foreign-denominated debt worsened the effect of deteriorating balance of payments.

While the post-pandemic recovery was generally faster than expected, some consequences of these disruptions continue to last, having caused significant setbacks in countries' economic development. There are some important lessons to be learned from different countries' positions at the onset of the pandemic. Firstly, the reliance of developing countries on a small number of exports exposes them to supply chain disruptions. Diversification of exports is, therefore, an important policy goal for them. Secondly, the link between export performance and debt sustainability aggravates the effects of worsening terms of trade on household incomes. Lastly, dependence on a few key export markets

[17] Meaning that farmers were getting less money for their crops at the point of sale, even before facing higher costs for inputs or transport directly cutting into their income.

increases risk, as a fall in demand in one market can lead to significant economic hardship for the reliant country. Many developing countries rely on exports of goods for which substituting purchasers is difficult in the short run. This means that export market diversification needs to be planned and incentivised in advance of adverse shocks. There is a serious risk that current trend towards geopolitically driven fragmentation of supply chains worsens the reliance on individual, geopolitically aligned export markets. Advanced economies should take these risks for their trading partners into account when devising their own resilience-driven import diversification strategies.

References

Anner, M. (2020) *Abandoned? The impact of COVID-19 on workers and businesses at the bottom of global garment supply chains*, Center for Global Workers' Rights, Penn State University, available at https://www.workersrights.org/research-report/abandoned-the-impact-of-covid-19-on-workers-and-businesses-at-the-bottom-of-global-garment-supply-chains/

Arita, S., J. Grant, S. Sydow and J. Beckman (2021) 'Has global agricultural trade been resilient under coronavirus (COVID-19)? Findings from an econometric assessment of 2020', *Food Policy* 107: 102204, available at https://doi.org/10.1016/j.foodpol.2021.102204

Bank of Zambia (2020) *Direction of Trade Report, First Quarter 2020*, available at https://www.boz.zm/ZambiaDirectionofTradeReportQ12020.pdf

Béné, C., M. Bakker, M. Chavarro, R. Even, M. Melo and M. Sonneveld (2021) 'Global assessment of the impacts of COVID-19 on food security', *Global Food Security* 31: 100575, available at https://doi.org/10.1016/j.gfs.2021.100575

Bloem, J.R. and J. Farris (2022) 'The COVID-19 pandemic and food security in low- and middle-income countries: A review', *Agriculture & Food Security* 11(55), available at https://doi.org/10.1186/s40066-022-00391-4

Boudreau, L., J. Cajal-Grossi and R. Macchiavello (2023) 'Global value chains in developing countries: A relational perspective from coffee and garments', *Journal of Economic Perspectives* 37(3): 59–86, available at https://doi.org/10.1257/jep.37.3.59

Cattaneo, O., G. Gereffi and C. Staritz (2010) *Global value chains in a postcrisis world: A development perspective*, World Bank, available at https://documents1.worldbank.org/curated/en/432691468332065846/pdf/569230PUB0glob1C0disclosed010151101.pdf

Dissa, A., M. Slingerland, K.E. Giller and K. Descheemaeker (2024) 'Effects of the COVID-19 induced cotton crisis on agricultural production and livelihoods of smallholders in southern Mali', *Frontiers in Sustainable Food Systems, 7*: 1269355, available at https://doi.org/10.3389/fsufs.2023.1269355

FAO (2021) *The impact of COVID-19 on fisheries and aquaculture food systems, possible responses*, Information Paper, Food and Agriculture Organization of the United Nations, available at https://www.fao.org/3/cb2537en/cb2537en.pdf

IEA (2020) *Oil market report – April 2020*, International Energy Agency, available at https://www.iea.org/reports/oil-market-report-april-2020

ILO (2020) 'COVID-19 and the textiles, clothing, leather and footwear industries', ILO Sectoral Brief, International Labour Organisation, available at https://www.ilo.org/resource/brief/covid-19-and-textiles-clothing-leather-and-footwear-industries

IMF (2020) *World economic outlook: A long and difficult ascent*, October, International Monetary Fund, available at https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020

IMF (2025) *Debt Vulnerabilities and Financing Challenges in Emerging Markets and Developing Economies—An Overview of Key Data, Policy Papers 2025/002*, International Monetary Fund, available at https://doi.org/10.5089/9798229002264.007

Inter-agency Task Force (2022) *Financing for Sustainable Development Report 2022*, United Nations Inter-agency Task Force on Financing for Development, available at https://www.un.org/ohrlls/sites/www.un.org.ohrlls/files/fsdr_2022.pdf

Kilian, L. and X. Zhou (2020) 'Oil prices, exchange rates and interest rates', *CFS Working Paper* 646, Centre for Financial Studies, available at https://doi.org/10.2139/ssrn.3731015

Meyer, C.J., M. Hardy, M. Witte, G. Kagy and E. Demeke (2021) 'The market-reach of pandemics: Evidence from female workers in Ethiopia's ready-made garment industry', *World Development* 137: 105179, available at https://doi.org/10.1016/j.worlddev.2020.105179

Pahl, S., C. Brandi, J. Schwab and F. Stender (2022) 'Cling together, swing together: The contagious effects of COVID-19 on developing countries through global value chains', *The World Economy* 45(2): 539-60, available at https://doi.org/10.1111/twec.13094

Rudin-Rush, L., C. McIntosh, D. Zeitlin and G. Amankwah (2022) 'Food insecurity during the first year of the COVID-19 pandemic in four African countries', *Food Policy* 112: 102306, available at https://doi.org/10.1016/j.foodpol.2022.102306

Schmidhuber, J., J. Pound and B. Qiao (2020) 'COVID-19: Channels of transmission to food and agriculture', *Open Journal of Social Sciences* 8(11): 335–361, available at https://doi.org/10.4236/jss.2020.811026

Tröster, B. and K. Küblböck (2020) 'Unprecedented but not unpredictable: Effects of the COVID-19 crisis on commodity-dependent countries', *The European Journal of Development Research* 32: 1430–49, available at https://doi.org/10.1057/s41287-020-00313-9

UNCTAD (2019) *The State of Commodity Dependence 2019*, United Nations Conference on Trade and Development, available at https://unctad.org/publication/state-commodity-dependence-2019

UNCTAD (2021) *World Investment Report 2021: Investing in Sustainable Recovery,* United Nations Conference on Trade and Development, available at https://doi.org/10.18356/9789210054638

UNCTAD (2022) *Impact of the COVID-19 Pandemic on Trade and Development: Lessons Learned*, United Nations Conference on Trade and Development, available at https://unctad.org/system/files/official-document/osg2022d1_en.pdf

UNCTAD (2023) *Managing commodity price volatility in commodity-dependent developing countries*, Trade and Development Board, Fourteenth Session, United Nations Conference on Trade and Development, available at https://unctad.org/system/files/official-document/cimem2d57_en.pdf

World Bank (2020) *Commodity markets outlook*, April, available at http://hdl.handle.net/10986/33624

World Bank (2021) *An Investment Perspective on Global Value Chains,* available at https://www.worldbank.org/en/topic/competitiveness/publication/investment-perspective-on-global-value-chains

World Bank (2022) *World development report 2022: Finance for an equitable recovery*, available at https://www.worldbank.org/en/publication/wdr2022

World Bank (2025) *Nigeria development update: Building momentum for inclusive growth*, available at https://thedocs.worldbank.org/en/doc/18bb17d3b2d203e19fc8ecf281ed21da-0360012025/nigeria-development-update-building-momentum-for-inclusive-growth

WTO (2020a) *COVID-19 and agriculture: A story of resilience*, World Trade Organisation, available at https://www.wto.org/english/tratop_e/covid19_e/agric_report_e.pdf

WTO (2020b) 'COVID-19 and agriculture: a story of resilience', *Information Note*, 26 August, World Trade Organisation, available at https://www.wto.org/english/tratop_e/covid19_e/agric_report_e.pdf

WTO (2021) 'Impacts of the COVID-19 pandemic on cotton and its value chains: The case of the C-4 and other LDCs', Committee on Agriculture in Special Session, TN/AG/INF/31, 29 April, World Trade Organisation, available at https://www.wto.org/english/tratop_e/agric_e/covidinpactstudyc4ldcscotton_e.pdf

Bruegel, Rue de la Charité 33, B-1210 Brussels
(+32) 2 227 4210
info@bruegel.org
www.bruegel.org