

Economic vulnerability to the Russia–Ukraine war

Which low- and middle-income countries are most vulnerable?

Sherillyn Raga and Laetitia Pettinotti

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Key messages

The global economy is still recovering – modestly – from the pandemic and is now facing significant uncertainty over the Russia–Ukraine war. Initial estimates suggest that the war will cost the global economy up to \$950 billion in 2022.

Countries remotely situated from Russia and Ukraine are also likely to be affected. Mostly commodity importers in East Asia Pacific can lose up to \$29 billion, while most net commodity exporters in Africa may gain \$6 billion in the short-term. Costs would be higher and broad-based across regions if second round of effects of the war on inflation, financial flows and energy policy shifts are incorporated.

The vulnerability index developed in this paper quantifies the vulnerabilities of 118 low and middle-income countries (L&MICs) to the impact of the war based on individual countries' direct economic links to Russia and Ukraine, indirect exposure to global effects of the war, and resilience of macroeconomic fundamentals. The top seven most vulnerable countries are Belarus, Armenia, Kyrgyz Republic, Lebanon, Maldives, Montenegro and Uzbekistan.

The channels of impact of the war to L&MICs highlight the need for targeted and coordinated domestic policy and international donor interventions to increase the resilience of growth and economic transformation in L&MICs against future crises. There is also a need to address limited adoption of climate and sustainability policy considerations, which can compound L&MICs' vulnerabilities in times of economic shocks.

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Acronyms

DSA	Debt Sustainability Analysis
EU	European Union
FDI	foreign direct investment
FRED	Federal Reserve Economic Data
GDP	gross domestic product
IMF	International Monetary Fund
LDC	least developed country
L&MICs	low- and middle-income countries
OECD	Organisation for Economic Co-operation and Development
SWIFT	Society for Worldwide Interbank Financial Telecommunications
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
UNHCR	United Nations Refugee Agency
US	United States
USSR	Union of Soviet Socialist Republic
UNWTO	United Nations World Tourism Organization
WDI	World Development Indicators
WEO	World Economic Outlook
WITS	World Integrated Trade Solution

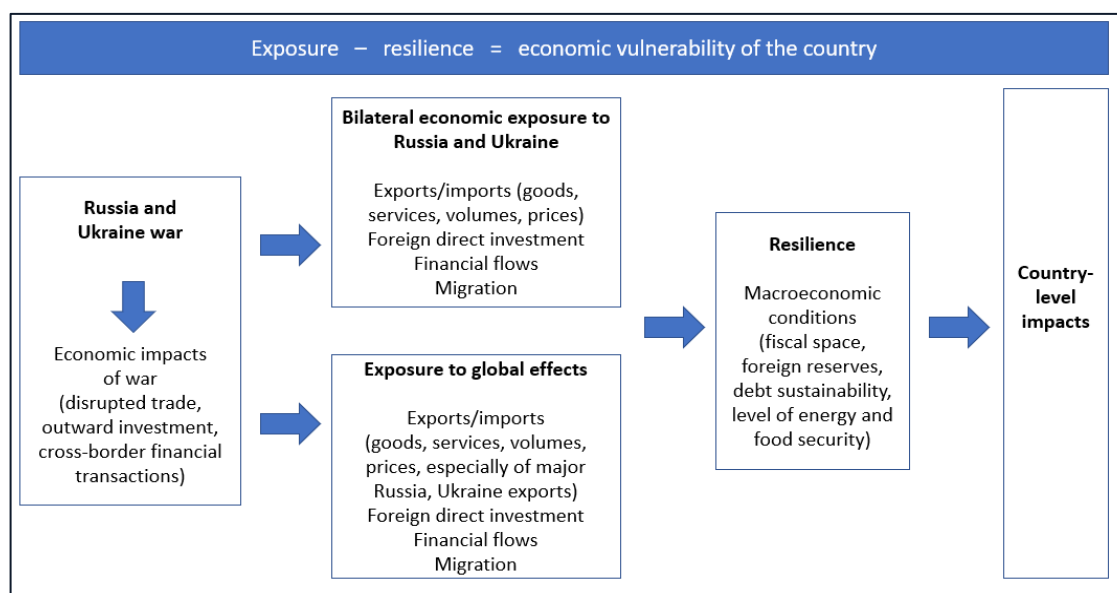
Executive summary

The global economy is still recovering – modestly – from the pandemic and is now facing significant uncertainty over the ongoing Russia–Ukraine war. It is too early to tell the magnitude of the impacts, which will depend on the duration and the escalation of the war and on the corresponding regional and global responses (e.g. economic sanctions) against Russia. Estimates suggest that the ongoing war will reduce global output by 0.4 percentage point to 1 percentage point (pp) in 2022 (Juanino and Millard, 2022; OECD 2022; Peterson et al, 2022). This will amount to global costs between \$380 billion and \$950 billion in 2022.

Global shocks can derail the growth and economic transformation trajectories of low- and middle-income countries (L&MICs). While this war is isolated to Russian and Ukraine territories, its impacts on L&MICs will be felt through various channels, such as disruptions in trade and upward pressure in global prices of products (e.g. oil, metals, wheat) of which Russia and/or Ukraine are major global suppliers. For instance, Brent crude oil prices went up by 11% between 25 February 2022 and 1 April 2022, while wheat prices increased by 30% during the same period. Such increase would occur in a context of already rising commodity prices. Global price indices increased for food (11%) and metals and minerals (12%) between December 2021 and February 2022 (World Bank, 2022).

This paper quantifies the economic vulnerabilities of 118 L&MICs to the economic effects of the Russia–Ukraine war through different impact channels. In this paper, economic vulnerability to the war at country level is measured as the combination of direct economic exposure to Russia and Ukraine (e.g. through bilateral trade and investment, migrants) and indirect exposure to the global effects of the war (e.g. through levels of commodity imports, trade and investment openness, tourism), minus resilience (e.g. quality of economic governance, capacity for energy transition, food security) to manage the negative impact of shocks that may emerge from the war (Figure 1).

Figure 1 Vulnerability to the potential economic impacts of the Russia–Ukraine war



Source: Authors following Raga and te Velde (2020)

We construct a new index based on 27 indicators used as proxies for direct and indirect economic exposure to the impact of the war, as well as the resilience of each individual country. The index highlights which countries are most vulnerable to the economic effects of the Russia–Ukraine war.

Countries with the greatest direct economic exposure to Russia and Ukraine are all former Union of Soviet Socialist Republics countries (top five: Belarus, Armenia, Kyrgyz Republic, Uzbekistan and Moldova). These countries' total trade (exports + imports) is largely with Russia and to a certain extent with Ukraine, ranging from 10% of gross domestic product (GDP) (Uzbekistan) to 62% of GDP (Belarus) on average from 2015 to 2019. In addition, the share of total migrants from these countries that were in Russia and Ukraine ranges from 60% (Armenia) to nearly 70% (Kyrgyz Republic) as of 2017.

We also examined countries that display indirect economic exposure through the war's potential global effects. Montenegro, Jordan, Lebanon and Maldives are the most indirectly exposed. All these countries are net importers of fuel, wheat, metals and food; have relatively high levels (as a percentage of GDP) of trade in goods and services, ranging from 91% (Jordan) to 141% (Maldives); and are mostly dependent on tourism and remittances.

For some countries, vulnerability is driven by low economic resilience (i.e. have less fiscal space or foreign reserves, have pre-existing inflationary and debt pressures or have low food security or are fossil fuel energy-dependent) to respond to the potential economic impact of the war. The least resilient countries in the ranking are Lebanon, Syria and Yemen – countries in conflict and fragility with pre-existing

persistent weak economic fundamentals and dependence on food imports and oil energy consumption – as well Burundi, Lao PDR and Zambia, which all have limited fiscal space and are at high risk of debt distress.

Taking direct and indirect economic exposure, and economic resilience together, we present an overall economic vulnerability index of 118 L&MICs with regard to the first round of impact of the Russia–Ukraine war. The top seven most vulnerable countries are Belarus, Armenia, Kyrgyz Republic, Lebanon, Maldives, Montenegro and Uzbekistan.

Vulnerability within regions or income level groups may also vary depending on their economic exposure to the war and level of resilience. For example, within Africa, the most vulnerable are commodity importers, and tourism- and remittance-dependent countries such as Cabo Verde, Comoros, The Gambia and Sudan. Meanwhile, Cameroon, Ghana, Nigeria and South Africa are the least exposed, given that they are mostly net commodity exporters and do not depend heavily on remittances or tourism activities. We also identify the most vulnerable countries within the group of least developed countries (LDCs). Among LDCs, the most vulnerable are Yemen, Sudan, The Gambia and Comoros, driven by these countries' net position as commodity importers, combined with pre-existing weak economic fundamentals (e.g., widening public deficit or high risk of distress).

Beyond this economic vulnerability, we also provide estimates of possible first round of impacts through trade channels. Based on a conservative assumption that global prices for fuel, wheat, metal and food products will rise by 10% over this year, the negative impact to L&MICs would at least be \$18 billion. However, the highest aggregate losses, up to \$29 billion, may be witnessed in East Asia and Pacific countries, which are mostly oil importers, followed by likely net losses worth \$15 billion in South Asia. There are gains at the aggregate level for countries in the Middle East and North Africa (\$13 billion) and sub-Saharan Africa (\$6 billion), driven by increased prices of their oil exports. We put emphasis that these are estimates for short-term impacts, and the costs of the war for L&MICs would likely be higher if second round of effects (e.g., impact from slowdown of the global economy or China, persistent inflation, volatile financial flows) and long-term impacts (e.g., implications of change in energy and value chain policies) are incorporated.

The vulnerability index and early estimates of possible impacts through trade channels are first attempts to assess the potential effects of the war on L&MICs. There are other risks to L&MICs that need close monitoring, including:

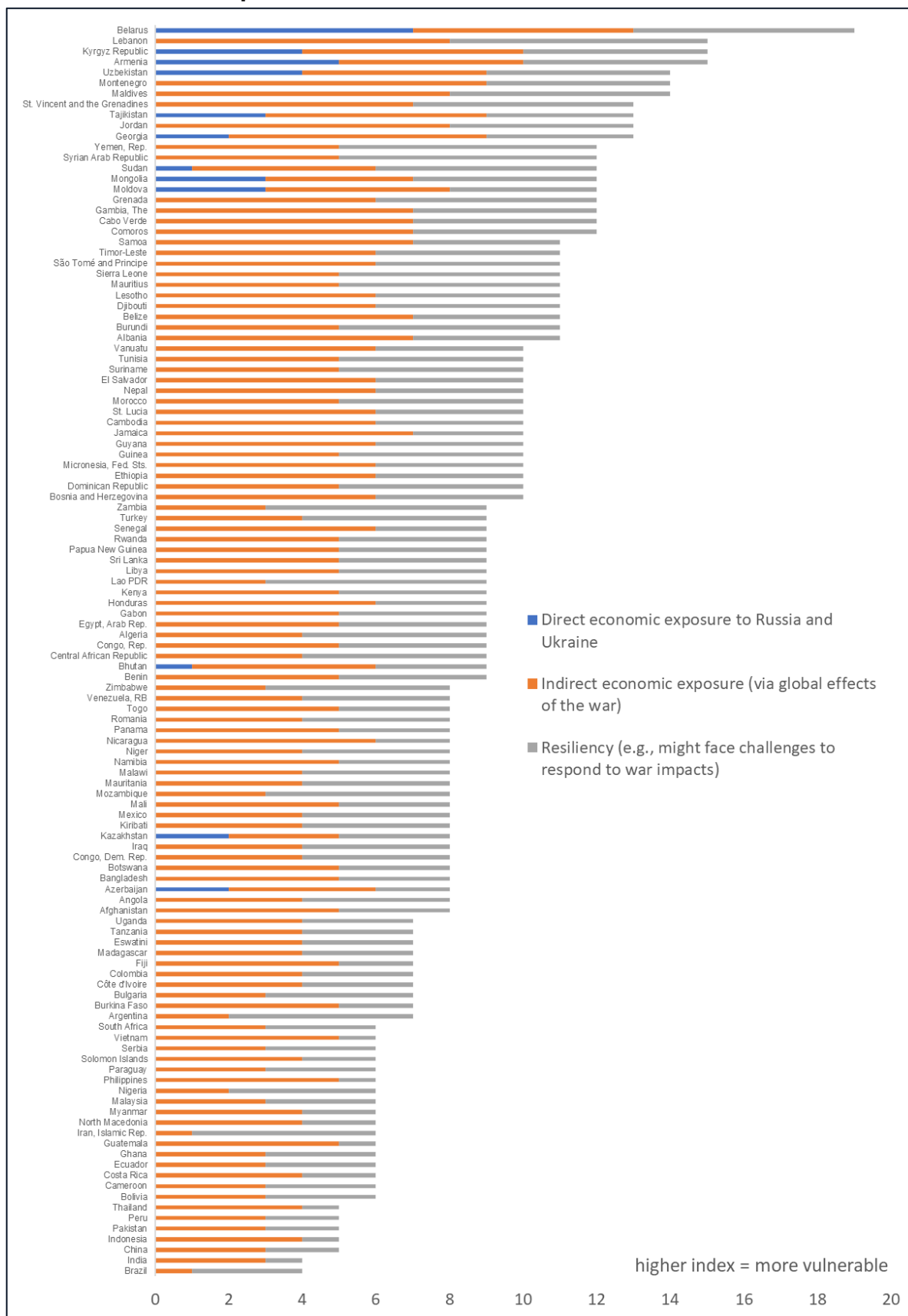
- impacts of the war on global commodity prices which can accelerate inflation and food insecurity

- the financial spill-over effects on L&MICs of monetary policy stances taken in advanced economies to arrest inflation (e.g. increasing interest rates)
- recent announcements by the EU, the UK and the US regarding reducing dependence on Russian oil, which, while accelerating a transition away from fossil fuel, may induce persistent high oil prices (bringing about further inflationary pressures) for oil-importing countries as limited global demand for non-Russian oil increases
- the extent to which the conflict and geopolitical tensions may shift global trade and supply chain production (e.g. away from oil and automotives from Russia; exporters of inputs and technology accelerating the global transition towards low carbon energy).

Large uncertainties remain but the channels of impacts of the shocks from this war on L&MICs identified in this paper highlight the need for targeted and coordinated domestic policy and international donor interventions to increase the resilience of growth and economic transformation in L&MICs against future crises. The analysis also highlights the need to address limited adoption, driven by poor means of implementation due to limited international climate finance delivery, of climate and sustainability policy considerations (e.g. as evidenced by low usage of renewable energy, oil dependence). This can compound L&MICs' vulnerabilities in times of economic shocks. The channels of impact of the war in each of the 118 L&MICs in this paper could inform short- and longer-term domestic policy and aid support decisions with regard to the importance of trade and investment diversification (e.g. sectoral, partners), value chain policies, strong macroeconomic and debt management, and facilitating climate finance and policies to transition away from fuel dependency.

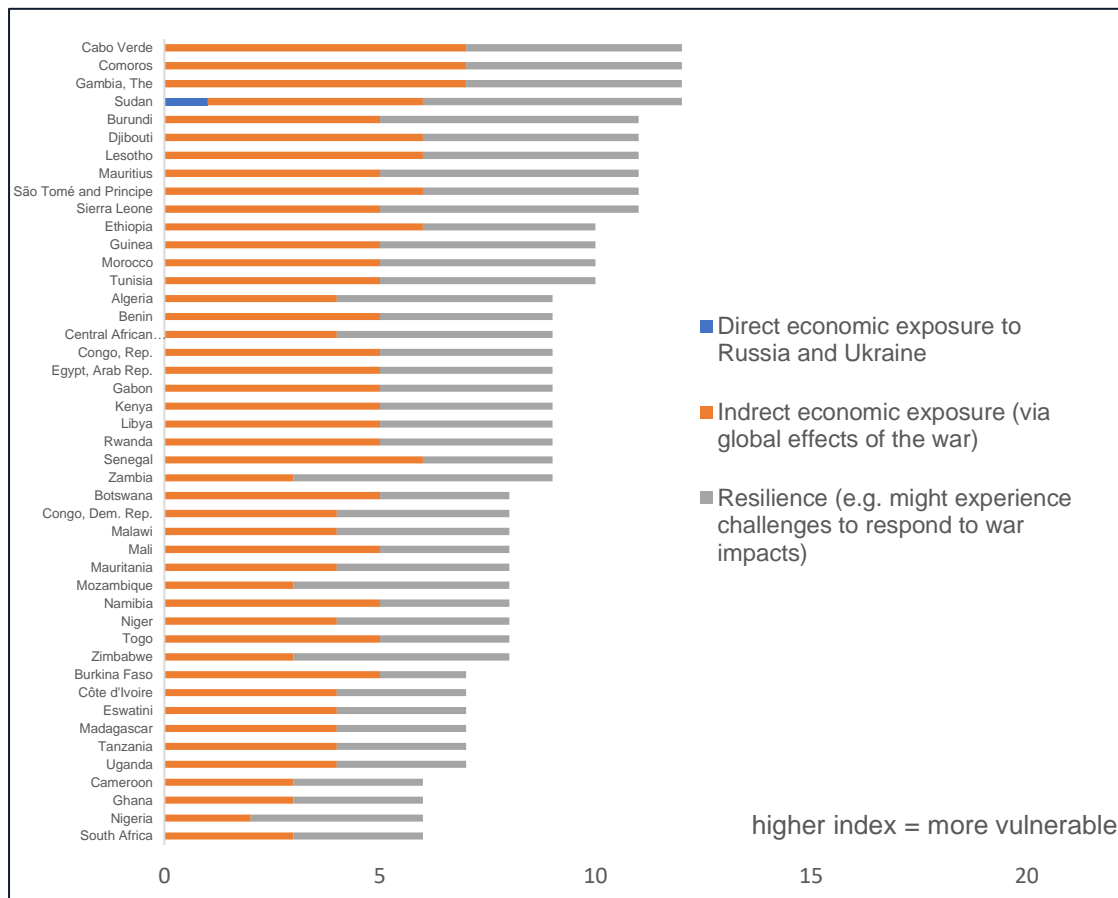
The ranking for all L&MICs (Figure 2), African countries (Figure 3) and LDCs (Figure 4) according to their economic vulnerability to the war are shown below.

Figure 2 Most vulnerable countries to the potential economic impacts of the Russia–Ukraine war



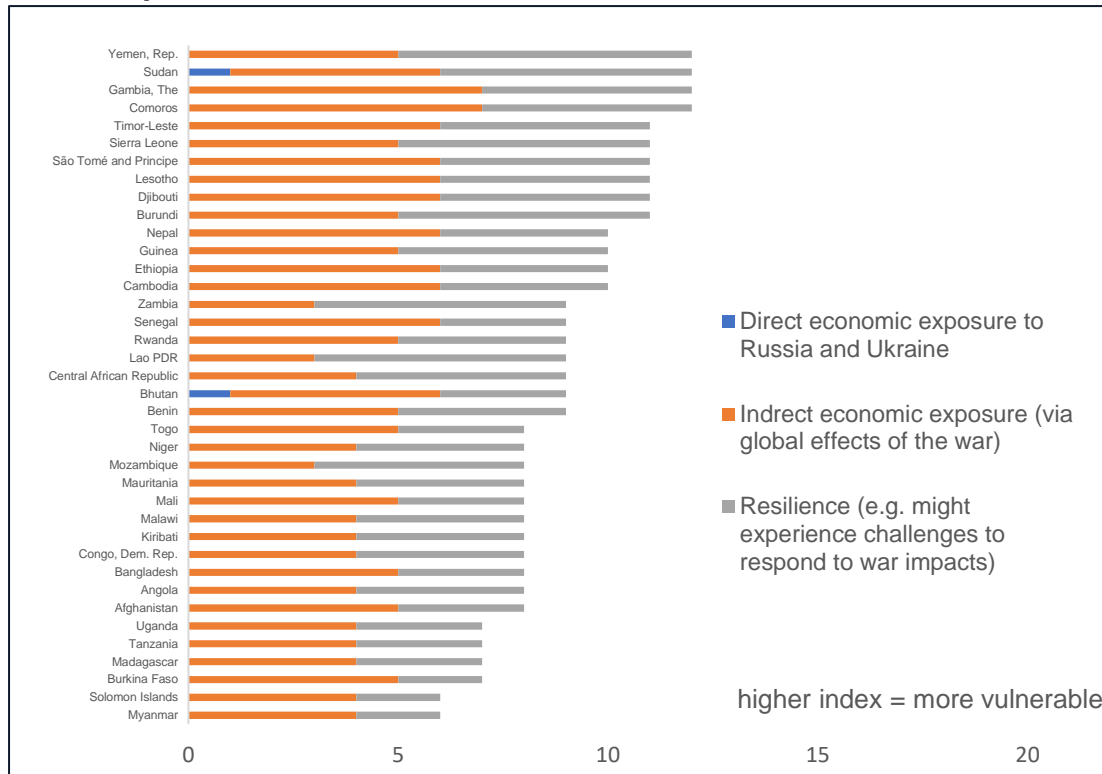
Source: Authors

Figure 3 Most vulnerable African countries to the economic impacts of the Russia–Ukraine war



Source: Authors

Figure 4 Most vulnerable LDCs to the potential economic impacts of the Russia–Ukraine



Source: Authors

1 Introduction

The global economy is still recovering – modestly – from the pandemic and is now facing significant uncertainty over the ongoing Russia and Ukraine war. Inevitably, growth and economic transformation trajectories are subject to domestic and external shocks. In the past, we have examined the impact of shocks such as financial crises, the eurozone crisis, a slowdown in China and the Covid-19 pandemic.¹ The Russia–Ukraine war may also have major economic impacts on low- and middle-income countries (L&MICs), especially in the context of fragile recovery from the pandemic. We examine these in this paper.

On 24 February 2022, Russia began its assault on Ukraine. In response, Ukraine introduced martial law, banning fighting-age men from leaving the country (Al Jazeera, 2022). As of 24 March 2022, Ukrainian civilian casualties had reached more than 2,600, and refugees fleeing Ukraine numbered 3.9 million (UNHCR, 2022). Economic sanctions by some high-income countries against Russia span from freezing of the Central Bank of Russia’s international reserves, to removing some Russian lenders from SWIFT global payments, to sanctions of various magnitudes on oil imports from Russia by the US, the UK and the EU (Nolsoe and Pop, 2022; Politi et al., 2022).

This paper assesses the potential vulnerabilities and impacts in L&MICs with regard to the effects of the war. Russia and Ukraine are major global suppliers of basic commodities. Should L&MICs situated far from Ukraine and Russian territories be concerned about the possible economic impacts? How might they be affected and through what transmission channels? While some global impacts are emerging already, such as increasing oil and wheat prices, there is less discussion of the effects on individual L&MICs.

This paper examines this and assesses the economic vulnerabilities of 118 countries by considering their exposure and resilience to the direct and indirect economic effects of the war. We also identify the most vulnerable countries in Africa and among the group of least developed countries (LDCs).

The structure of this paper is as follows. Section 2 scopes what we know so far on the potential economic impacts of the war and some observable impacts. Section 3 then proceeds with a presentation of our quantitative approach to assess the vulnerabilities of 118 L&MICs to the Russia–Ukraine war. Section 4 provides the results of the data analysis and

¹ See ODI analyses on impact of economic shocks here: <https://odi.org/en/search/?q=shockwatch+bulletin>; and <https://set.odi.org/coronavirus-economic-vulnerability-economic-impact-and-economic-policy-response-tracker/>.

identifies the countries that are most vulnerable to the war. It also highlights which countries are most vulnerable in Africa and within the group of LDCs. Section 5 provides an estimate of possible economic impacts on L&MICs through significant spill-over effects (e.g. losses or gains from net trade of oil, food, metals). Section 6 concludes and provides policy implications.

2 Potential economic impacts of the war- what we know so far

Given the multiplicity of direct and indirect economic linkages between Russia and Ukraine and the global economy, the war between these two countries will likely have a downside impact on global economic growth. Peterson et al (2022) estimate that the crisis may reduce Russian gross domestic product (GDP) growth by more than 5 percentage points (pp). Following the revocation of most-favoured nation treatment of Russian goods by the G7 and the EU, Russian GDP is expected to have a permanent reduction of more than 1% under the scenario of severe trade sanctions (Evenett and Muendler, 2022).

Estimates of the impact of the war on output growth range between -0.4pp and -0.9pp on the world economy, between -0.3pp and -0.7pp for the UK and between -0.4pp and -1.2pp for India (Peterson et al, 2022). The Organisation for Economic Co-operation and Development (OECD) (2022) estimates that global GDP growth could reduce by over 1 percentage point in the first year. These estimates translate to global costs of between \$380 billion and \$950 billion in 2022.²

As pointed out in OECD (2022), Russia and Ukraine, together, account for only about 2% of global trade and GDP, while foreign direct investment (FDI) stock in Russia and by Russia accounts for about 1% of the world's total. The large influence of the two countries on the global economy resides in their role as major suppliers of commodities. Together, Russia and Ukraine represent 30% of global exports of wheat, 20% of corn, mineral fertilisers and natural gas and 11% of oil.

As a result, trade will likely be the main transmission channel of economic impacts of the war on the global economy and for L&MICs. As such, the economic effects of the war may stem from increases in the price of oil, metals, food and transport freight and general supply chain disruptions (UNCTAD, 2022). For instance, Brent crude oil prices went up by 11% between 25 February 2022 and 1 April 2022,

² Authors' computations using International Monetary Fund (IMF) current GDP estimates for 2021 and citing a range of estimated reduced global growth output (by 0.4pp to 1pp).

while wheat prices increased by 30% during the same period.³ Such increase would occur in a context of already rising commodity prices. Global price indices increased for food (11%) and metals and minerals (12%) between December 2021 and February 2022 (World Bank, 2022).

When it comes to the impact of the crisis on L&MICs, the effects of the war on trade costs and commodity prices may prove to be large and trigger food shortages, inflation-induced recession and, ultimately, deeper poverty as well as potential civil unrest.

The prospect of food insecurity crises, in particular, in the context of climate change and increased input costs (fertilisers and fuels) could put next years' agricultural supply under stress, especially for countries importing a large share of their commodities from the two countries at war. For example, a third of African wheat imports in 2018–2020 came from Russia and 12% from Ukraine; this is close to half of Africa's wheat imports relying on the two countries at war. If considering only African least developed countries (LDCs), such figures go up to 39% (29% and 10% of imports from Russia and Ukraine, respectively) (UNCTAD, 2022).

The war also has implications for remittance flows, which comprise a large share of national output in many countries. Ukraine is likely to see an increase in remittances, which contributed about 12% of the country's GDP in 2021. Central Asian countries, however, are likely to see their remittance flows decrease sharply as a result of the combined effect of a decline in economic activity in Russia and the weakening of the Russian rouble against the US dollar (Ratha and Kim, 2022).

³ Authors' computations based on Brent oil price data from <https://oilprice.com/oil-price-charts/> and wheat prices data from <https://markets.businessinsider.com/commodities/wheat-price> accessed on 4 April 2022.

3 Economic vulnerabilities to the Russia-Ukraine war

3.1 Economic exposure

3.1.1 Direct economic exposure to Russia and Ukraine

The halted or lessened economic activities in Russia and Ukraine will directly affect other countries depending on their bilateral economic exposure to the two countries. For example, those which export significantly to Russia and Ukraine will experience sharp (if not suspended) demand from these countries, lowering the volume and value of their exports. The more a country trades and receives FDI, tourists and remittances from Russia and Ukraine, the more the country will be directly affected.

We use the following indicators to assess the direct exposure to economic shock of countries to Russia and Ukraine. Indicators that are beyond the respective thresholds point to a direct economic vulnerability to the war.

Table 1 Direct economic exposure indicators

Indicator	Period covered	Threshold
Exports of goods to Russia (% of total goods exports)	2015–2020 or latest available data	Greater than 10%
Exports of goods to Ukraine (% of total goods exports)	2015–2020 or latest available data	Greater than 10%
Imports of goods from Russia (% of total goods imports)	2015–2020 or latest available data	Greater than 10%
Imports of goods from Ukraine (% of total goods imports)	2015–2020 or latest available data	Greater than 10%
Total trade with Russia (goods exports+imports as % of GDP)	2015–2020 or latest available data	Greater than 10%
Total trade with Ukraine (goods exports+imports as % of GDP)	2015–2020 or latest available data	Greater than 10%
Russian outward FDI (% of total FDI, average 2015–2020)	2015–2020	Greater than 10%
Migrants to Russia (% of total migrants)	2017	Greater than 10%
Migrants to Ukraine (% of total migrants)	2017	Greater than 10%

Note: See Appendices 1 and 2 for details and sources of data.

3.1.2 Indirect economic exposure to global effects of war

While the military war is circumscribed to Ukraine's territory, its global economic spill-over effects will be felt by countries worldwide. Third-country effects may be positive for some but negative for others, depending on their general economic openness (e.g. trade, tourism, investment). For instance, Russia is a major supplier of crude oil (15% of global crude oil exports as of 2020) and oil preparations (10%).⁴ The shortage of supply globally as a result of the ongoing war will push global prices up (e.g. Brent crude oil prices increased by 56% between 3 January and 7 March 2022).⁵ This will have a positive impact on net oil exporters in many African countries at aggregate level but will have welfare effects for net oil importers in Asia. Global prices of products of which Russia and/or Ukraine is a major supplier (e.g. wheat, corn, iron, coal, platinum, aluminium) will also likely increase.

Other indirect channels will be through overall weak global appetite for investment, trade and tourism amid the uncertainty on the escalation and duration of the Russia–Ukraine war and the global response (e.g. economic sanctions on Russia) in the effort to stop the war. We use the following indicators to assess the exposure of countries to global effects of the Russia–Ukraine war. Indicators that are beyond the respective thresholds point to an indirect economic vulnerability to the war.

Table 2 Indirect economic exposure indicators

Indicator	Period covered	Threshold
Net fuel trade (export–import) (\$ million)	2019 or latest available data	Less than 0 (i.e. net importer)
Net wheat trade (export–import) (\$ million)	2019 or latest available data	Less than 0 (i.e. net importer)
Net metal trade (export–import) (\$ million)	2019 or latest available data	Less than 0 (i.e. net importer)
Net food trade (export–import) (\$ million)	2019 or latest available data	Less than 0 (i.e. net importer)
Trade in goods and services (% of GDP)	2015–2020 or latest available data	Greater than 30%
FDI inflows (% of GDP)	2015–2020 or latest available data	Greater than 10%
Personal remittances (% of GDP)	2015–2020 or latest available data	Greater than 10%
Migrants (% of population)	2015	Greater than 10%
Tourism receipt (% of total exports)	2015–2020	Greater than 10%

Note: See Appendices 1 and 2 for details and sources of data.

⁴ Authors' computations based on WITS data (4-digit product level).

⁵ Authors' computations based on data from <https://oilprice.com/oil-price-charts/>.

3.2 Economic resilience

Economic resilience is the ability of a country to respond to a shock. This includes indicators of available fiscal and monetary space but also records of governance for the effective implementation of measures. We also use indicators of progress on energy transition aligned with climate goals and indicators of food security, as these will be critical in the event of a protracted Russia–Ukraine war (e.g. global effects through oil, fertiliser and food price pressures).

We use the following indicators as a measure of economic resilience. Indicators that are beyond the respective thresholds point to less resilience to absorb or respond to the direct or indirect shocks emerging from the war.

Table 3 Economic resilience indicators

Indicator	Period covered	Threshold indicating less resilience
General government net lending/borrowing (% of GDP)	Estimate for 2021 or latest data	Less than -3%
Current account balance (% of GDP)	Estimate for 2021 or latest data	Less than -3%
Foreign currency reserves (months of imports 2020)	2020 or latest data	Less than 3 months
External debt stock (% of gross national income)	2020 or latest data	Greater than 50%
Overall debt distress or external debt distress	As of end-December 2021	In high risk of debt distress or in debt distress
Inflationary pressure (i.e. percentage deviation between pre-Covid (October 2019) and latest inflation forecast for 2021)	2021 or latest available data/forecasts	Higher than 2 percentage points deviation
Renewable energy consumption (% of total final energy consumption)	2015	Below 20%
Net food imports (import less exports) (% of total imports)	2016–2018	Greater than 10%
Government effectiveness index	2020	Less than 0

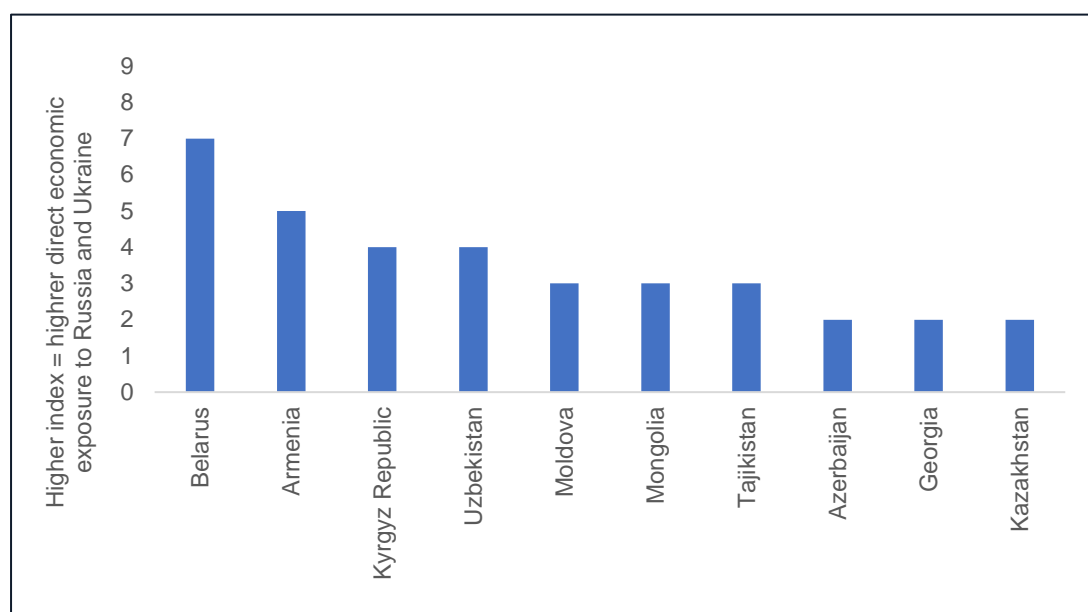
Note: See Appendices 1 and 2 for details and sources of data.

4 Which countries are most economically vulnerable to the Russia-Ukraine war?

By constructing a sub-index based on the nine indicators for direct exposure, we identify the countries that are most exposed through their bilateral economic ties to Russia and Ukraine (Figure 5). See Appendix 1 for the data used to construct the index, and Appendix 2 for the data sources.

Given their history and greater regional integration with Russia, countries that were formerly part of the Union of Soviet Socialist Republics (USSR) are the most directly exposed countries to the economic effects of the war. These countries' total trade (exports + imports) is largely with Russia and to a certain extent with Ukraine, ranging from 10% of GDP (Uzbekistan) to 62% of GDP (Belarus) on average from 2015 to 2019. In addition, the share of total migrants from these countries in Russia and Ukraine range from 60% (Armenia) to nearly 70% (Kyrgyz Republic) as of 2017. The reduced economic activity in Russia is likely to reduce employment opportunities and incomes of migrant workers and hence their ability to send remittances. This, added to the weakening of the Russian rouble against the US dollar, is likely to further weaken the economies of countries in Figure 5. Ratha and Kim (2022) project a likely decline of remittance flows of 8% for Belarus, 19% for Armenia and 33% for the Kyrgyz Republic. Sudan is directly exposed to the economic effect of the war as a result of its high levels of Russian goods imports (13% of total imports).

Figure 5 Countries with the most direct economic exposure to Russia and Ukraine

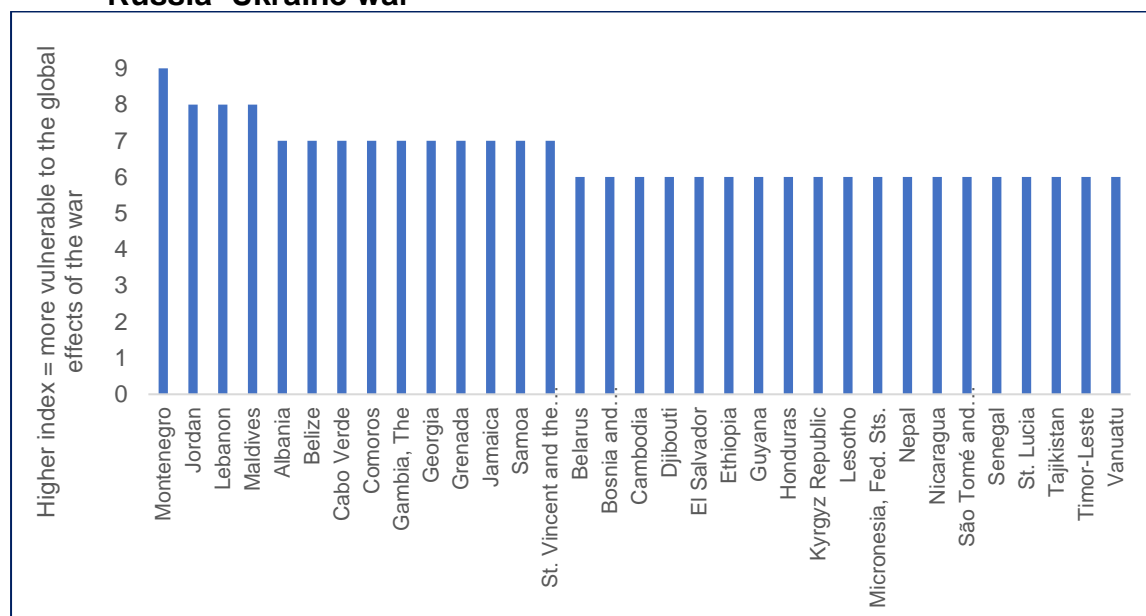


Note: The sub-index on direct economic exposure is calculated based on nine indicators, which are tagged to be vulnerable if they exceed a 10% threshold: export of goods to Russia (% of total goods exports), export of goods to Ukraine (% of total goods exports); imports of goods from Russia (% of total goods imports); imports of goods from Ukraine (% of total goods imports); total trade with Russia (goods exports+imports as % of GDP); total trade with Ukraine (goods exports+imports as % of GDP); Russian outward FDI (% of total FDI, average 2015–2020); migrants to Russia (% of total migrants); migrants to Ukraine (% of total migrants). Each indicator is given an equal weight with the highest possible index of 9. See Appendices 1 and 2 for details and sources of data.

While 106 out of 118 in our sample do not have significant direct exposure to Russia or Ukraine (as defined by our thresholds in Table 1), other countries are likely to be affected indirectly through the global effects of the war. The countries that are most exposed to the indirect effects of the war are Montenegro, Jordan, Lebanon and Maldives (Figure 6). These countries combine indirect exposure for all nine, or at least eight, indicators of the sub-index: a negative net trade balance for fuel, wheat, metal and food, as well as reliance on trade (ranging from 91% to 141% of GDP), migrant remittances and tourism as well as FDI to some extent.

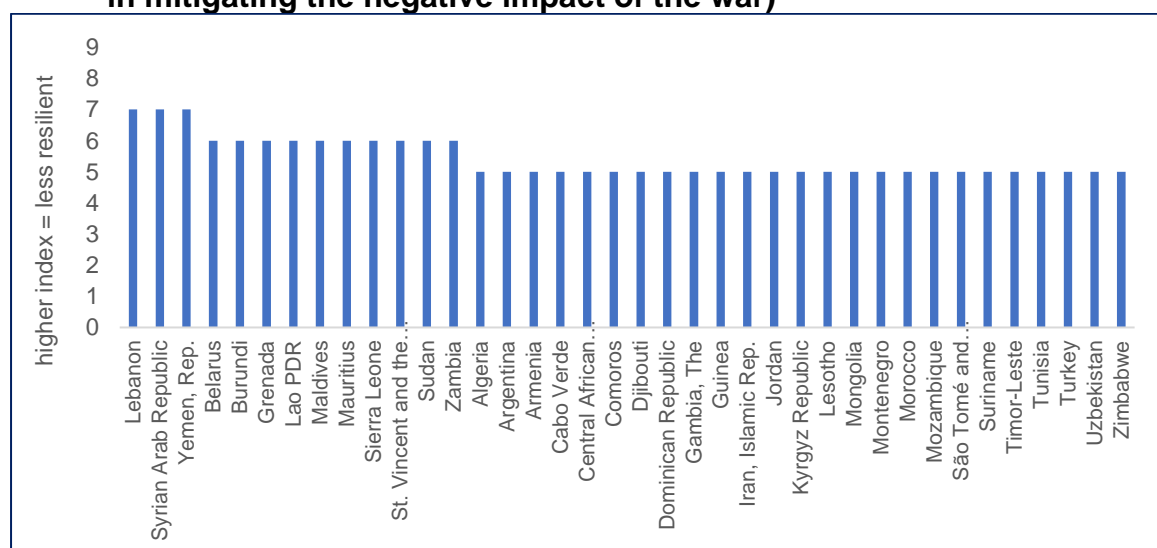
The least resilient countries in our sample are Lebanon, Syria and Yemen— countries in conflict and fragility with pre-existing persistent weak economic fundamentals and dependence on food imports and oil energy consumption. Other less resilient economies include Burundi, Lao PDR and Zambia which have all limited fiscal space and are at high risk of debt distress (Figure 7).

Figure 6 Most exposed countries to the global effects of the Russia–Ukraine war



Note: The index on indirect economic vulnerability (global effects) is calculated based on nine indicators, which are tagged to be vulnerable if they exceed a certain threshold: net importer of fuel (i.e. threshold: net trade (export-import) is less than zero, meaning import>export); net importer of wheat; net importer of metal; net importer of food; trade in goods and services that is higher than 30% of GDP; FDI inflows greater than 10% of GDP; personal remittances greater than 10% of GDP; migrants higher than 10% of population; and tourism receipts higher than 10% of total exports. Each indicator is given an equal weight with the highest possible index of 9. See Appendices 1 and 2 for details and sources of data.

Figure 7 Least resilient economies (e.g. may face challenges in mitigating the negative impact of the war)

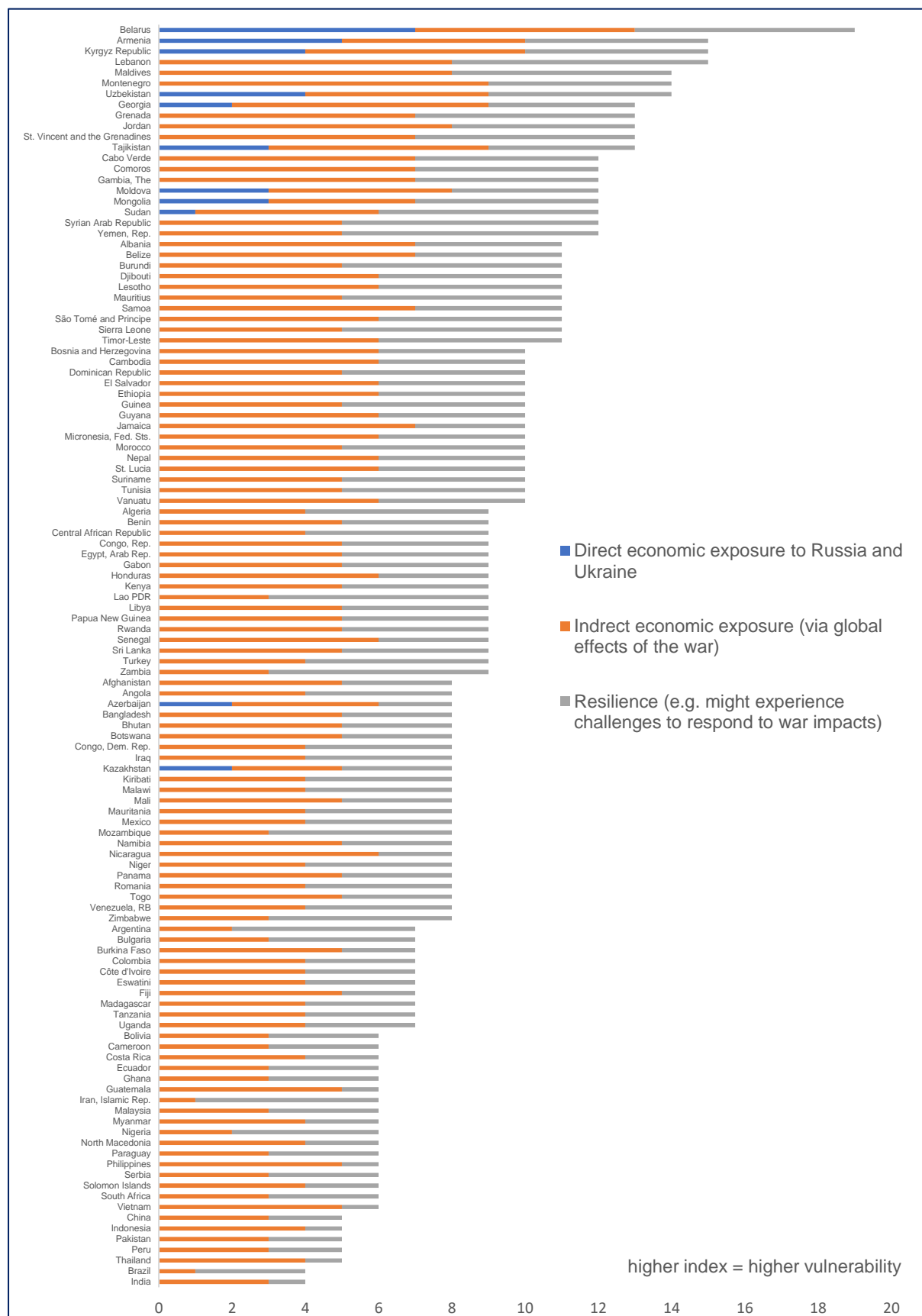


Note: The index on resiliency is based on nine indicators that are tagged to be less resilient if they exceed a certain threshold: general government net lending/borrowing that is less than -3% of GDP; current account balance less than -

3 % of GDP; foreign currency reserves at less than 3 months' worth of imports; external debt stock that exceeds 50% of gross national income; classified by the World Bank as a country at high risk of or already in debt distress/external debt distress; exhibits inflationary pressures (i.e. higher than 2 percentage points deviation between pre-Covid and latest inflation forecast for 2021); renewable energy consumption less than 20% of total final energy consumption; net food imports (imports less exports) that exceed 10% of total imports; and government effectiveness index that is less than zero (e.g. perceived to have a weak governance capacities). Each indicator is given an equal weight with the highest possible index of 9. See Appendices 1 and 2 for details and sources of data.

Combining the three sub-indices (direct and indirect exposure, and level of resilience) gives an overall vulnerability index. The top seven most vulnerable countries are Belarus, Armenia, Kyrgyz Republic, Lebanon, Maldives, Montenegro and Uzbekistan.

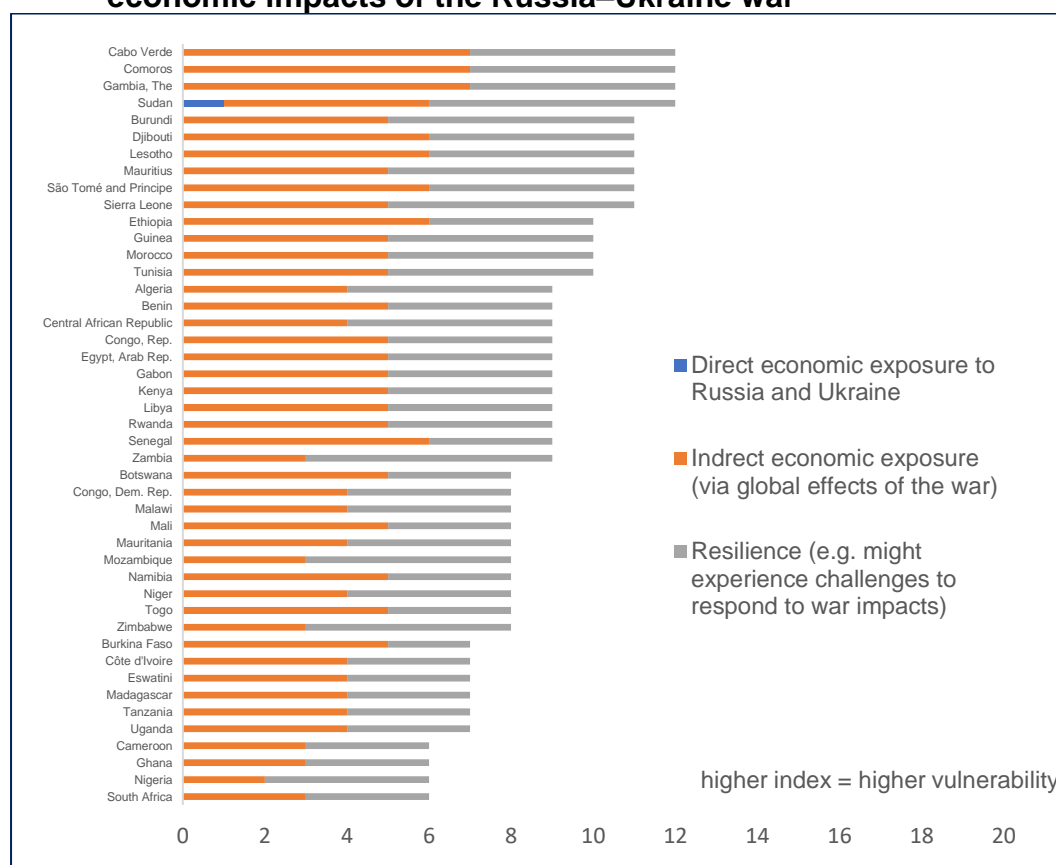
Figure 8 Most vulnerable countries to potential economic impact of the Russia–Ukraine war



Source: Authors

The most vulnerable African countries are those that have the highest indirect economic exposure to the global effects of the war combined with the lowest economic resilience. These countries include Cabo Verde, Comoros, The Gambia and Sudan, followed by Burundi, Djibouti, Lesotho, Mauritius, São Tomé and Príncipe and Sierra Leone. Among these countries, only Sudan has a direct economic exposure to Russia (i.e., 13 % of Sudan’s total good imports are from Russia). However, all these African countries might be affected through global effects, since they are net importers of fuel, wheat and metals, and are highly dependent on trade of goods and services. Low resilience particularly drives the vulnerability of Algeria, Central African Republic, Mozambique, Zambia and Zimbabwe. Even if Zambia may gain at the aggregate level through export of food and metal, the country scores very low on all indicators of macro-economic resilience (pre-existing challenges around widening deficit, low level of foreign reserves, high risk of debt distress and inflationary pressures).

Figure 9 Most vulnerable African countries to the potential economic impacts of the Russia–Ukraine war

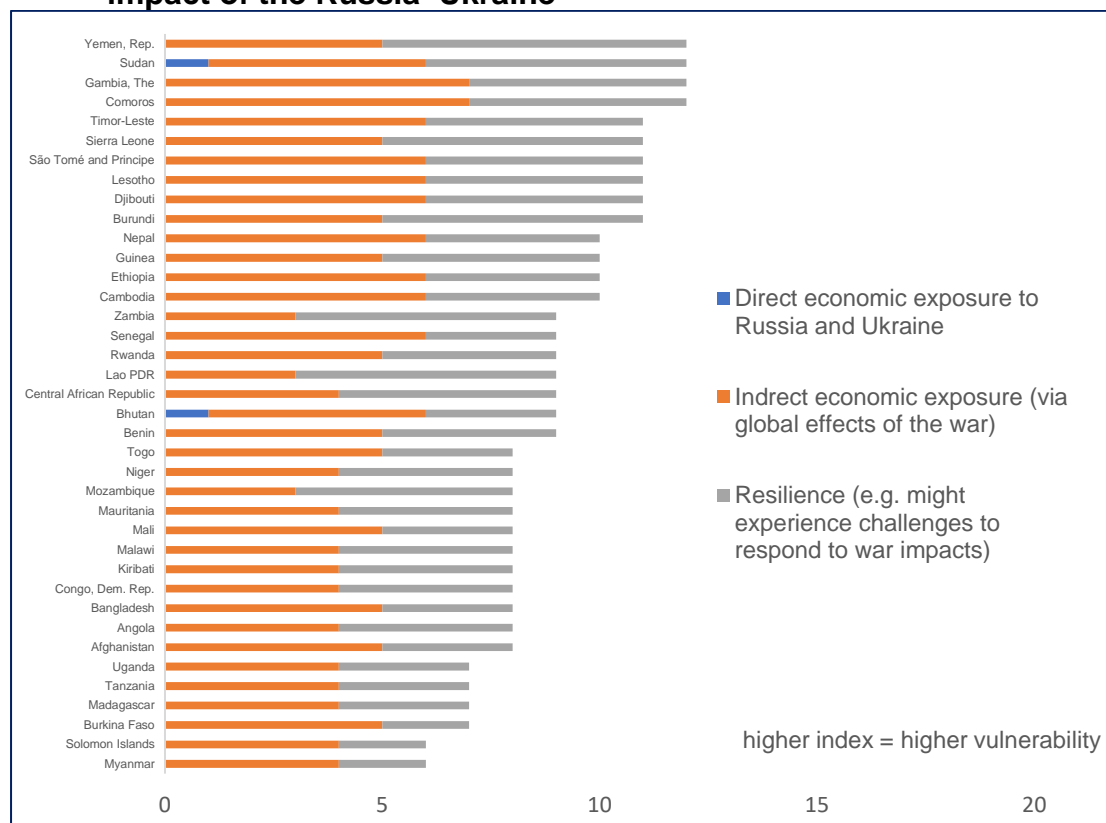


Source: Authors

Note: LDCs are exposed to the economic effect of the war through their status as net importers of commodities, their reliance on remittances and tourism receipt and compounded by pre-existing weak governance. Half of the top ten most vulnerable LDCs have macroeconomic challenges pre-

dating the war and driven by their state of conflict or fragility (i.e., conflict situation in Yemen, Sudan, Burundi; and high institutional and social fragility in small states Comoros and Timor-Leste). The least vulnerable LDCs display less vulnerability due to their lower indirect exposure, not due to their greater economic resilience.

Figure 10 Most vulnerable LDCs to the potential economic impact of the Russia–Ukraine



Source: Authors

5 Potential impacts on low- and middle-income countries

There is high uncertainty on how the channels of impact of the war will evolve to affect L&MICs, depending on the duration and escalation of the war, the responses (e.g. economic sanctions) of advanced economies and the continuity of Russia's trade with trading partners such as China and India.

Based on the observable first round of impact of the war in terms of increasing global prices of fuel, wheat, metals and food products so far, we anticipate that L&MICs will likely be affected by the war through price effects in trade. Table 4 shows the gains and losses in the value of net trade (exports minus imports) of fuel, wheat, metals and food assuming the Russia–Ukraine war will induce an increase in global prices for these products by 10% over the year. East Asia and Pacific countries – mostly oil importers – may experience the most negative impact this year, worth \$29 billion, followed by South Asia (\$15 billion). There are aggregate gains for countries in the Middle East and North Africa and sub-Saharan Africa, driven by increased prices of their oil exports. We put emphasis that these are estimates for short-term impacts, and negative impact would likely be higher if second round of effects are incorporated. For example, exports from sub-Saharan Africa may decline if the war induces a substantial reduction of global output.

Table 4 Aggregate gains (+) and losses (-) in \$ millions if global prices of fuel, wheat, metal and food products increase by 10% over the year

Region	Income level	Gains (+) and losses (-) in \$ millions if fuel, wheat, metal and food prices increase by 10% over the year				
		Net fuel trade	Net wheat trade	Net metal trade	Net food trade	Net loss
East Asia & Pacific (18 countries)	Low					
	Lower middle	-1,516	-505	-2,886	-745	
	Upper middle	-31,831	-202	6,863	2,108	
	<i>Low and middle</i>	-33,347	-707	3,977	1,363	-28,714
Europe & Central Asia (17 countries)	Low					
	Lower middle	38	-60	-207	-118	
	Upper middle	397	19	-703	-231	
	<i>Low and middle</i>	434	-42	-910	-349	-866
Latin America & Caribbean (23 countries)	Low					
	Lower middle	-301	-20	-211	-76	
	Upper middle	7,769	-229	-2,708	3,371	
	<i>Low and middle</i>	7,468	-249	-2,919	3,295	7,596
Middle East & North Africa (12 countries)	Low	87	-67	-226	-137	
	Lower middle	8,459	-624	-1,430	-337	
	Upper middle	9,259	-112	-1,206	-393	
	<i>Low and middle</i>	17,805	-803	-2,861	-868	13,273
South Asia (8 countries)	Low	-187	-14	-46	-48	
	Lower middle	-13,246	-131	-1,628	322	
	Upper middle	-47	0	-24	-16	
	<i>Low and middle</i>	-13,480	-145	-1,698	259	-15,065
Sub-Saharan Africa (40 countries)	Low	-920	-296	353	-200	
	Lower middle	7,028	-292	-96	577	
	Upper middle	-451	-50	287	12	
	<i>Low and middle</i>	5,658	-638	544	389	5,954
All 118 L&MICs						-17,821

Note: Authors' computations based on net trade (export minus imports) based on 2019 exports and imports data from the World Integrated Trade Solution (WITS) database, and with an assumption of a 10% increase in global prices of fuels, wheat, metal and food products.

6 Conclusion

This paper provides the first attempt to assess the economic vulnerabilities of, and potential impacts through trade channels on, 118 L&MICs with regard to the Russia–Ukraine war. While it is early to assess the magnitude of the impact of the war on the global economy, it is expected that global economic costs will be between \$380 billion and \$950 billion in 2022.

This paper offers a conceptual framing of direct and indirect economic exposure combined with economic resilience, which is the basis of the vulnerability ranking of L&MICs in terms of the economic effects of the war. Through this approach, this paper identifies that most former USSR countries (Belarus, Armenia, Kyrgyz Republic, Uzbekistan and Moldova) are most vulnerable through their direct economic links with Russia and Ukraine. Some countries, such as Montenegro, Jordan, Lebanon and Maldives, are most vulnerable in terms of their exposure to the war's potential global effects (e.g. via commodity trade and prices, tourism, remittances). The least resilient economies in the sample are fragile and conflict-affected states (Lebanon, Syria and Yemen) and countries with limited fiscal space and at high risk of debt distress (Burundi, Lao PDR and Zambia). Taking these indicators together, the top seven most vulnerable countries are Belarus, Armenia, Kyrgyz Republic, Lebanon, Maldives, Montenegro and Uzbekistan.

The paper also shows that impacts may vary between countries and regions. For example, within Africa, the most vulnerable are commodity importers and tourism- and remittance-dependent countries such as Cabo Verde, Comoros, The Gambia and Sudan. Meanwhile, Cameroon, Ghana, Nigeria, and South Africa and South Africa are the least exposed, given that they are mostly net commodity exporters, do not depend heavily on remittances or tourism activities, and have higher resilience (e.g., in terms of relatively lower debt as % of GNI, adequate foreign reserves) compared to other African countries.

Beyond economic vulnerability, we also provide estimates of possible impacts based on trade channels. The negative impact on L&MICs through net trade in fuel, wheat, metals and food alone will be at least \$18 billion. The highest aggregate losses, up to \$29 billion, will be witnessed in East Asia and Pacific countries, which are mostly oil importers, followed by likely net losses worth \$15 billion in South Asia. There are gains for countries in the Middle East and North Africa (\$13 billion) and sub-Saharan Africa (\$6 billion), driven by

increased prices of their oil exports. We put emphasis that these are estimates for the short-term impacts, and negative impact would likely be higher if second round of effects and long-term implications (e.g., persistent inflation, volatile financial flows, slow down of the global economy or China, change in energy and value chain policies) are incorporated.

The vulnerability index and early estimates of possible impacts through trade channels are first attempts to assess the potential economic effects of the war on L&MICs. There are other risks to L&MICs that need close monitoring, including:

- impacts of the war on global commodity prices in terms of accelerating inflation and food insecurity
- the financial spill-over effects on L&MICs of monetary policy stances taken in advanced economies to arrest inflation (e.g. increasing interest rates)
- recent announcements by the EU, the UK and the US regarding reducing dependence on Russian oil, which, while accelerating a transition away from fossil fuel, may induce persistent high oil prices (bringing about further inflationary pressures) for oil-importing countries as limited global demand for non-Russian oil increases
- the extent to which the conflict and geopolitical tensions may shift global trade and supply chain production (e.g. away from oil and automotives from Russia; exporters of inputs and technology accelerating the global transition towards clean energy).

Large uncertainties remain but the channels of impacts of the shocks from this war on L&MICs identified in this paper highlight the need for targeted and coordinated domestic policy and international donor interventions to increase the resilience of growth and economic transformation in L&MICs against future crises. The analysis also highlights the need to address poor adoption, driven by poor means of implementation due to limited international climate finance delivery, of climate and sustainability policy considerations (e.g. as evidenced by low usage of renewable energy, oil dependence), which can compound L&MICs' vulnerabilities in times of economic shocks. The channels of impact of the war in each of the 118 L&MICs in this paper could inform short- and longer-term domestic policy and aid support decisions with regard to the importance of trade and investment diversification (e.g. sectoral, partners), strong macroeconomic and debt management, and facilitating climate finance and policies to transition away from fuel dependency.

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Appendix 1 Data used to construct the index

Table A1. Direct exposure (demand side)

Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Thresholds			> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10
Afghanistan	South Asia	Low income	0.21	0.02	2.58	0.06	1.14	0.03	0.00	0.10	0.04
Angola	Sub-Saharan Africa	Lower middle income	0.00	0.00	1.13	0.20	0.16	0.03	Confidential	0.08	0.01
Albania	Europe & Central Asia	Upper middle income	0.02	0.10	1.99	0.57	0.78	0.24	0.09	0.02	0.01
Argentina	Latin America & Caribbean	Upper middle income	0.98	0.06	0.67	0.03	0.19	0.01	0.01	0.03	0.05
Armenia	Europe & Central Asia	Upper middle income	25.64	0.71	29.89	3.11	14.62	1.19	24.41	54.47	5.15

ODI Emerging Analysis

Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Azerbaijan	Europe & Central Asia	Upper middle income	3.74	1.58	17.36	3.90	5.35	1.49	0.47	63.19	7.14
Burundi	Sub-Saharan Africa	Low income	0.04	0.06	1.54	0.15	0.45	0.04	No registered outward Russian FDI to Burundi	0.03	0.00
Benin	Sub-Saharan Africa	Lower middle income	0.03	1.57	2.00	0.33	0.40	0.15	No registered outward Russian FDI to Benin	0.01	0.00
Burkina Faso	Sub-Saharan Africa	Low income	0.00	0.02	4.49	0.49	1.15	0.13	No registered outward Russian FDI to Burkina Faso	0.03	0.00
Bangladesh	South Asia	Lower middle income	0.88	0.07	1.25	0.52	0.45	0.14	0.00	0.01	0.00
Bulgaria	Europe & Central Asia	Upper middle income	1.78	0.76	9.47	1.64	6.16	1.28	6.36	0.40	0.14
Bosnia and Herzegovina	Europe & Central Asia	Upper middle income	1.15	0.13	4.06	0.23	2.63	0.17	8.26	0.03	0.00
Belarus	Europe & Central Asia	Upper middle income	42.16	11.39	54.89	3.72	53.89	8.02	27.00	46.46	15.72
Belize	Latin America & Caribbean	Lower middle income	0.00	No registered exports to Ukraine	0.01	0.01	0.00	0.00	-1.68	0.01	0.01
Bolivia	Latin America & Caribbean	Lower middle income	0.04	0.00	0.74	0.01	0.18	0.00	0.00	0.01	0.00

ODI Emerging Analysis

Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Brazil	Latin America & Caribbean	Upper middle income	1.01	0.05	1.71	0.04	0.28	0.01	0.01	0.03	0.01
Bhutan	South Asia	Lower middle income	No registered exports to Russia	No registered exports to Ukraine	0.22	0.03	0.12	0.02	No registered outward Russian FDI to Bhutan	0.01	0.01
Botswana	Sub-Saharan Africa	Upper middle income	0.05	0.00	0.92	0.01	0.39	0.00	0.00	0.03	0.00
Central African Republic	Sub-Saharan Africa	Low income	0.02	0.14	0.05	0.36	0.01	0.00	No registered outward Russian FDI to Central African Republic	0.01	0.00
China	East Asia & Pacific	Upper middle income	1.84	0.24	2.64	0.22	0.70	0.07	0.02	0.56	0.07
Côte d'Ivoire	Sub-Saharan Africa	Lower middle income	0.04	0.00	0.85	0.42	0.17	0.08	0.01	0.01	0.01
Cameroon	Sub-Saharan Africa	Lower middle income	0.07	No registered exports to Ukraine	1.88	0.96	0.38	0.15	0.00	0.08	0.02
Congo, Dem. Rep.	Sub-Saharan Africa	Low income	0.00	0.00	1.44	0.10	0.24	0.02	Confidential	0.00	0.00
Congo, Rep.	Sub-Saharan Africa	Lower middle income	0.01	0.00	1.04	0.15	0.28	0.04	Confidential	0.20	0.03
Colombia	Latin America & Caribbean	Upper middle income	0.26	0.05	0.59	0.10	0.13	0.02	0.00	0.01	0.00

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Comoros	Sub-Saharan Africa	Lower middle income	1.28	0.11	0.01	0.36	0.04	0.08	-0.04	0.07	0.00
Cabo Verde	Sub-Saharan Africa	Lower middle income	No registered exports to Russia	No registered exports to Ukraine	0.57	0.04	0.26	0.02	0.00	0.02	0.00
Costa Rica	Latin America & Caribbean	Upper middle income	0.26	0.15	0.34	0.23	0.13	0.09	0.01	0.02	0.02
Djibouti	Middle East & North Africa	Lower middle income	No registered exports to Russia	0.00	0.00	2.13	0.00	1.31	No registered outward Russian FDI to Djibouti	0.06	0.00
Dominican Republic	Latin America & Caribbean	Upper middle income	0.09	0.00	0.48	0.12	0.13	0.03	0.09	0.00	0.00
Algeria	Middle East & North Africa	Lower middle income	0.02	0.03	1.84	0.80	0.54	0.24	Confidential	0.04	0.01
Ecuador	Latin America & Caribbean	Upper middle income	4.23	0.40	1.12	0.03	1.02	0.08	0.02	0.02	0.00
Egypt, Arab Rep.	Middle East & North Africa	Lower middle income	1.38	0.18	4.83	3.19	1.35	0.80	0.05	0.03	0.00
Ethiopia	Sub-Saharan Africa	Low income	0.66	0.05	0.64	1.34	0.14	0.25	0.00	0.03	0.01
Fiji	East Asia & Pacific	Upper middle income	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Micronesia, Federated States	East Asia & Pacific	Lower middle income	No registered exports to Russia	No registered exports to Ukraine	No registered imports from Russia	0.01	No registered trade with Russia	0.01	No registered outward Russian FDI to FSM	0.00	0.00
Gabon	Sub-Saharan Africa	Upper middle income	0.00	0.43	0.01	0.11	0.00	0.22	No registered outward Russian FDI to Gabon	0.02	0.00
Georgia	Europe & Central Asia	Upper middle income	15.29	4.46	9.82	5.37	6.95	3.29	2.07	51.45	7.75
Ghana	Sub-Saharan Africa	Lower middle income	0.03	0.30	1.01	0.56	0.20	0.18	0.00	0.04	0.01
Guinea	Sub-Saharan Africa	Low income	0.00	2.57	0.38	0.15	0.11	0.60	0.01	0.04	0.01
Gambia, The	Sub-Saharan Africa	Low income	No registered exports to Russia	No registered exports to Ukraine	0.88	0.26	0.26	0.07	No registered outward Russian FDI to Gambia	0.01	0.00
Grenada	Latin America & Caribbean	Upper middle income	0.01	0.04	0.01	0.01	0.00	0.00	0.04	0.03	0.01
Guatemala	Latin America & Caribbean	Upper middle income	0.12	0.36	0.37	0.04	0.11	0.07	0.00	0.00	0.00
Guyana	Latin America & Caribbean	Upper middle income	0.00	1.77	0.03	0.06	0.02	0.55	0.01	0.00	0.00
Honduras	Latin America & Caribbean	Lower middle income	0.33	0.05	0.93	0.00	0.42	0.01	No registered Russian FDI in Honduras	0.00	0.00

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Indonesia	East Asia & Pacific	Lower middle income	0.65	0.17	0.76	0.47	0.23	0.10	0.00	0.00	0.00
India	South Asia	Lower middle income	0.76	0.12	1.43	0.52	0.33	0.10	0.03	0.03	0.02
Iran, Islamic Rep.	Middle East & North Africa	Lower middle income	0.28	0.03	2.42	0.60	0.35	0.07	Confidential	0.16	0.17
Iraq	Middle East & North Africa	Upper middle income	No registered exports to Russia	No registered exports to Ukraine	0.45	0.84	0.07	0.14	7.77	0.05	0.01
Jamaica	Latin America & Caribbean	Upper middle income	5.30	0.03	0.00	No registered imports from Ukraine	0.48	0.00	0.00	0.00	0.00
Jordan	Middle East & North Africa	Upper middle income	0.05	0.09	1.27	0.89	0.60	0.42	0.02	0.11	0.49
Kazakhstan	Europe & Central Asia	Upper middle income	9.63	1.95	36.88	1.51	9.83	0.84	2.20	64.94	5.94
Kenya	Sub-Saharan Africa	Lower middle income	1.33	0.10	1.92	0.41	0.45	0.08	0.03	0.09	0.00
Kyrgyz Republic	Europe & Central Asia	Lower middle income	13.58	0.41	28.07	1.19	18.86	0.76	4.35	75.68	3.60
Cambodia	East Asia & Pacific	Lower middle income	0.36	0.02	0.10	0.01	0.26	0.02	0.00	0.01	0.00

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Kiribati	East Asia & Pacific	Lower middle income	0.00	No registered exports to Ukraine	No registered imports from Russia	0.02	0.00	0.01	No registered Russian outward FDI to Kiribati	0.04	0.00
Lao PDR	East Asia & Pacific	Lower middle income	0.01	0.00	0.10	0.01	0.03	0.00	0.01	0.01	0.00
Lebanon	Middle East & North Africa	Upper middle income	0.15	0.03	3.88	1.52	1.63	0.68	0.01	0.12	0.22
Libya	Middle East & North Africa	Upper middle income	0.00	0.00	1.28	2.34	0.43	0.70	Confidential	0.15	0.05
St. Lucia	Latin America & Caribbean	Upper middle income	0.09	0.00	0.01	0.02	0.01	0.00	0.21	0.00	0.00
Sri Lanka	South Asia	Lower middle income	1.72	0.25	1.14	0.35	0.48	0.11	0.05	0.03	0.00
Lesotho	Sub-Saharan Africa	Lower middle income	No registered exports to Russia	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morocco	Middle East & North Africa	Lower middle income	0.85	0.13	3.10	0.95	1.46	0.42	Confidential	0.04	0.06
Moldova	Europe & Central Asia	Upper middle income	9.11	2.66	12.37	9.84	7.61	5.28	6.30	28.75	15.40
Madagascar	Sub-Saharan Africa	Low income	0.10	0.01	0.20	0.06	0.07	0.02	0.00	0.05	0.03

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Maldives	South Asia	Upper middle income	0.00	0.01	0.05	0.05	0.03	0.02	0.00	1.41	0.00
Mexico	Latin America & Caribbean	Upper middle income	0.07	0.00	0.33	0.04	0.14	0.02	0.00	0.00	0.00
North Macedonia	Europe & Central Asia	Upper middle income	0.66	0.13	1.85	1.07	1.59	0.81	0.09	0.05	0.00
Mali	Sub-Saharan Africa	Low income	0.02	0.02	1.39	0.55	0.39	0.16	No registered Russian outward FDI to Mali	0.01	0.00
Myanmar	East Asia & Pacific	Lower middle income	0.12	0.07	0.15	0.16	0.07	0.06	No registered Russian outward FDI to Myanmar	0.02	0.00
Montenegro	Europe & Central Asia	Upper middle income	0.58	0.29	0.30	0.32	0.21	0.19	25.75	0.10	0.00
Mongolia	East Asia & Pacific	Lower middle income	1.05	0.00	27.45	0.72	10.98	0.27	0.23	26.02	5.43
Mozambique	Sub-Saharan Africa	Low income	0.11	0.05	0.93	0.14	0.47	0.08	0.00	0.01	0.00
Mauritania	Sub-Saharan Africa	Lower middle income	5.37	0.15	3.51	1.30	3.00	0.61	0.04	0.01	0.07
Mauritius	Sub-Saharan Africa	Upper middle income	0.14	0.01	0.19	0.08	0.09	0.03	0.72	0.04	0.00

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Malawi	Sub-Saharan Africa	Low income	2.80	1.96	0.80	0.17	0.59	0.27	No registered Russian FDI to Malawi	0.01	0.00
Malaysia	East Asia & Pacific	Upper middle income	0.31	0.06	0.48	0.08	0.48	0.08	0.00	0.08	0.00
Namibia	Sub-Saharan Africa	Upper middle income	0.03	0.00	0.41	0.06	0.27	0.04	0.02	0.06	0.00
Niger	Sub-Saharan Africa	Low income	0.00	0.00	0.13	0.24	0.03	0.05	0.00	0.01	0.01
Nigeria	Sub-Saharan Africa	Lower middle income	0.01	0.00	1.75	0.34	0.18	0.03	0.00	0.06	0.02
Nicaragua	Latin America & Caribbean	Lower middle income	0.20	0.04	0.84	0.01	0.52	0.02	0.02	0.01	0.00
Nepal	South Asia	Lower middle income	0.14	0.01	0.26	0.57	0.08	0.20	-0.62	0.01	0.00
Pakistan	South Asia	Lower middle income	0.66	0.20	0.65	0.31	0.17	0.07	0.00	0.01	0.01
Panama	Latin America & Caribbean	Upper middle income	0.00	No registered exports to Ukraine	0.04	0.00	0.01	0.00	-0.07	0.02	0.01
Peru	Latin America & Caribbean	Upper middle income	0.30	0.01	0.85	0.07	0.22	0.01	0.02	0.02	0.01

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Philippines	East Asia & Pacific	Lower middle income	0.13	0.01	0.86	0.25	0.29	0.08	0.00	0.00	0.00
Papua New Guinea	East Asia & Pacific	Lower middle income	0.15	0.01	0.08	0.01	0.07	0.00	No registered Russian FDI to Papua New Guinea	0.00	0.00
Paraguay	Latin America & Caribbean	Upper middle income	7.66	0.00	1.04	0.01	2.03	0.00	0.00	0.00	0.02
Romania	Europe & Central Asia	Upper middle income	1.61	0.78	3.16	1.04	1.77	0.66	0.06	0.11	0.00
Rwanda	Sub-Saharan Africa	Low income	0.23	0.00	1.59	0.16	0.48	0.05	No registered Russian FDI in Rwanda	0.01	0.00
Sudan	Sub-Saharan Africa	Low income	0.00	0.00	12.48	0.81	3.51	0.22	0.00	0.01	0.01
Senegal	Sub-Saharan Africa	Lower middle income	0.06	0.05	3.00	1.57	0.99	0.52	No registered Russian FDI in Senegal	0.01	0.00
Solomon Islands	East Asia & Pacific	Lower middle income	0.00	0.00	0.00	0.00	0.00	0.00	No registered FDI in Solomon Islands	0.45	1.48
Sierra Leone	Sub-Saharan Africa	Low income	0.00	No registered exports to Ukraine	0.06	0.36	0.06	0.05	0.02	0.00	0.00
El Salvador	Latin America & Caribbean	Lower middle income	0.01	0.01	0.27	0.01	0.11	0.01	No registered Russian FDI to El Salvador	0.00	0.00

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Serbia	Europe & Central Asia	Upper middle income	5.27	0.61	8.02	1.11	5.89	0.78	3.81	0.00	0.00
São Tomé and Príncipe	Sub-Saharan Africa	Lower middle income	No registered exports to Russia	No registered exports to Ukraine	0.03	0.01	0.01	0.00	No registered Russian FDI to STP	0.02	0.00
Suriname	Latin America & Caribbean	Upper middle income	0.00	0.00	0.09	0.14	0.04	0.05	No registered Russian FDI to Suriname	0.01	0.00
Eswatini	Sub-Saharan Africa	Lower middle income	0.05	0.00	0.22	0.01	0.11	0.01	No registered Russian FDI to Eswatini	0.02	0.00
Syrian Arab Republic	Middle East & North Africa	Low income	0.25	0.55	8.19	8.05	0.63	0.61	-0.01	0.04	0.05
Togo	Sub-Saharan Africa	Low income	0.03	0.00	1.50	0.84	0.47	0.23	No registered Russian FDI in Togo	0.00	0.00
Thailand	East Asia & Pacific	Upper middle income	0.37	0.04	0.88	0.17	0.58	0.10	0.27	0.02	0.00
Tajikistan	Europe & Central Asia	Lower middle income	4.77	0.05	30.86	1.12	12.54	0.44	15.55	73.14	4.85
Timor-Leste	East Asia & Pacific	Lower middle income	No registered exports to Russia	No registered exports to Ukraine	No registered imports from Russia	No registered imports from Ukraine	Not applicable	Not applicable	No registered Russian FDI in Timor-Leste	0.00	0.00
Tunisia	Middle East & North Africa	Lower middle income	0.14	0.03	2.88	1.87	1.42	0.92	0.01	0.04	0.04

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
Turkey	Europe & Central Asia	Upper middle income	2.07	0.99	9.12	1.30	2.93	0.56	4.61	0.34	0.05
Tanzania	Sub-Saharan Africa	Lower middle income	0.17	0.03	1.19	0.19	0.21	0.04	0.00	0.07	0.01
Uganda	Sub-Saharan Africa	Low income	0.25	0.05	1.25	0.36	0.26	0.07	0.00	0.01	0.01
Uzbekistan	Europe & Central Asia	Lower middle income	14.23	0.86	19.86	1.54	8.92	0.65	2.17	55.41	11.19
St. Vincent and the Grenadines	Latin America & Caribbean	Upper middle income	0.00	0.00	0.00	0.03	0.00	0.01	-0.61	0.00	0.00
Venezuela, RB	Latin America & Caribbean		0.00	0.01	0.43	0.03	0.06	0.00	Confidential	0.01	0.00
Vietnam	East Asia & Pacific	Lower middle income	0.97	0.10	0.69	0.05	1.58	0.15	1.80	0.51	0.46
Vanuatu	East Asia & Pacific	Lower middle income	0.01	0.29	0.01	0.00	0.00	0.01	0.00	0.10	0.00
Samoa	East Asia & Pacific	Lower middle income	0.10	No registered exports to Ukraine	No registered imports from Russia	No registered imports from Ukraine	0.01	Not applicable	-0.14	0.00	0.00
Yemen, Rep.	Middle East & North Africa	Low income	0.00	No registered exports to Ukraine	3.63	1.49	0.60	0.21	-0.01	0.05	0.05

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Economy	Region	Income group	Exports of goods to Russia (% of total goods exports, ave. 2015–2020 or latest data)	Exports of goods to Ukraine (% of total goods exports, ave. 2015–2020 or latest data)	Imports of goods from Russia (% of total goods imports, ave. 2015–2020 or latest data)	Imports of goods from Ukraine (% of total goods imports, ave. 2015–2020 or latest data)	Total trade with Russia (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Total trade with Ukraine (goods exports+imports as % of GDP, ave. 2015-2020 or latest data)	Russian outward FDI (as % of total FDI, ave. 2015–2020 or latest data)	Migrants to Russia (% of total migrants, 2017)	Migrants to Ukraine (% of total migrants, 2017)
South Africa	Sub-Saharan Africa	Upper middle income	0.41	0.08	0.55	0.08	0.22	0.04	0.02	0.03	0.00
Zambia	Sub-Saharan Africa	Lower middle income	0.00	0.00	0.20	0.03	0.07	0.01	0.00	0.17	0.00
Zimbabwe	Sub-Saharan Africa	Lower middle income	0.01	0.06	0.47	0.12	0.14	0.05	0.01	0.01	0.00

Table A2. Indirect exposure (global demand/ spill-over)

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import) (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Thresholds			< 0 (net importer)	< 0 (net importer)	< 0 (net importer)	< 0 (net importer)	>10	>10	>10	>10	>10
Afghanistan	South Asia	Low income	-1,875.00	-141.27	-460.87	-478.52	51.49	0.42	3.74	1.18	4.45
Angola	Sub-Saharan Africa	Lower middle income	311,56.87	-150.15	-846.15	-799.55	60.09	-1.96	0.01	0.43	1.78
Albania	Europe & Central Asia	Upper middle income	-360.82	-42.84	-182.64	-379.25	92.32	8.05	10.24	1.99	48.24
Argentina	Latin America & Caribbean	Upper middle income	-1,175.73	2,295.48	-891.83	11,454.19	28.79	1.52	0.10	4.81	6.80
Armenia	Europe & Central Asia	Upper middle income	-696.93	-50.84	-84.87	199.93	84.41	1.72	12.37	6.34	25.01
Azerbaijan	Europe & Central Asia	Upper middle income	16,971.87	-340.22	-1,056.80	-634.97	85.01	5.64	2.57	2.71	11.15
Burundi	Sub-Saharan Africa	Low income	-160.12	-30.93	-77.56	-45.02	45.63	0.32	1.54	2.57	1.21
Benin	Sub-Saharan Africa	Lower middle income	-556.43	-9.11	-108.53	-103.64	52.08	1.34	1.59	2.26	5.11
Burkina Faso	Sub-Saharan Africa	Low income	-1,181.99	-27.20	-172.85	-165.16	59.48	1.42	2.94	3.89	4.64
Bangladesh	South Asia	Lower middle income	-5,041.83	-991.31	-3,567.26	-1,269.24	39.38	0.85	6.31	0.88	0.69

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Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Bulgaria	Europe & Central Asia	Upper middle income	-2,040.29	932.52	900.02	-110.31	129.15	3.39	3.02	1.43	10.31
Bosnia and Herzegovina	Europe & Central Asia	Upper middle income	-1,032.02	-64.65	-29.60	-772.91	101.75	2.37	10.85	0.91	12.65
Belarus	Europe & Central Asia	Upper middle income	-2,964.40	-64.28	-1,347.12	-497.41	132.72	2.42	2.05	11.40	2.83
Belize	Latin America & Caribbean	Lower middle income	-137.58	-4.02	-73.15	-24.33	117.83	3.79	5.38	14.99	47.39
Bolivia	Latin America & Caribbean	Lower middle income	1,190.82	-13.97	-684.48	156.95	57.25	0.29	3.47	1.33	8.28
Brazil	Latin America & Caribbean	Upper middle income	3,547.17	-1,509.45	4,135.86	16,501.30	26.69	3.57	0.17	0.34	2.37
Bhutan	South Asia	Lower middle income	-7.77	-4.09	-10.11	-27.13	85.24	0.12	2.09	6.60	16.91
Botswana	Sub-Saharan Africa	Upper middle income	-807.98	-26.18	-299.40	-494.16	92.58	1.36	0.25	7.10	7.55
Central African Republic	Sub-Saharan Africa	Low income	-22.36	No registered wheat and meslin trade	-12.82	-35.25	51.20	0.72	0.00	1.67	6.16
China	East Asia & Pacific	Upper middle income	-296,598.75	-897.39	88,384.21	5,325.48	38.49	1.59	0.20	0.07	1.44
Côte d'Ivoire	Sub-Saharan Africa	Lower middle income	-75.81	-182.34	-697.55	4,669.40	48.63	1.25	0.62	9.58	3.58

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Cameroon	Sub-Saharan Africa	Lower middle income	585.97	-192.07	-256.52	311.74	36.29	2.09	0.83	1.64	8.02
Congo, Dem. Rep.	Sub-Saharan Africa	Low income	-382.50	-96.51	6,770.37	-120.73	50.95	2.85	2.96	0.71	0.12
Congo, Rep.	Sub-Saharan Africa	Lower middle income	4,598.56	-54.64	-75.11	-113.41	143.34	28.95	0.16	8.51	0.93
Colombia	Latin America & Caribbean	Upper middle income	17,105.96	-465.28	-2,455.26	-1,434.95	35.40	3.95	2.03	0.28	11.18
Comoros	Sub-Saharan Africa	Lower middle income	-10.45	0.00	-14.24	-21.13	41.23	0.40	14.07	1.59	45.76
Cabo Verde	Sub-Saharan Africa	Lower middle income	-95.31	-4.43	-57.03	-54.70	93.45	5.87	12.68	2.87	53.51
Costa Rica	Latin America & Caribbean	Upper middle income	-1,687.59	-68.83	-1,013.39	236.03	66.17	4.50	0.90	8.77	17.52
Djibouti	Middle East & North Africa	Lower middle income	-31.61	-0.05	-20.08	-109.95	240.13	5.61	1.83	12.65	1.06
Dominican Republic	Latin America & Caribbean	Upper middle income	-3,931.14	-145.60	-828.16	18.31	49.95	3.41	8.20	3.95	37.14
Algeria	Middle East & North Africa	Lower middle income	31,884.49	-1,788.69	-6,501.51	-2,404.46	55.40	0.64	1.14	0.61	0.52
Ecuador	Latin America & Caribbean	Upper middle income	4,367.76	-315.48	-1,166.53	1109.10	44.88	1.01	2.83	2.40	7.62

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Egypt, Arab Rep.	Middle East & North Africa	Lower middle income	-2,951.27	-3,024.16	-6,764.39	-795.41	43.52	2.59	8.13	0.54	18.62
Ethiopia	Sub-Saharan Africa	Low income	-2,634.27	-458.42	-1,716.13	-416.16	33.65	3.90	0.77	1.08	39.08
Fiji	East Asia & Pacific	Upper middle income	-307.36	-54.66	-109.22	142.45	101.83	6.52	5.76	1.54	44.98
Micronesia, Federated States	East Asia & Pacific	Lower middle income	-56.76	-0.01	-8.73	-27.04	108.47	6.33	6.33	2.64	13.88
Gabon	Sub-Saharan Africa	Upper middle income	4,270.61	-39.36	-423.82	-106.87	69.85	7.76	0.12	15.56	0.53
Georgia	Europe & Central Asia	Upper middle income	-1,277.41	-108.10	-203.69	-95.70	102.10	8.80	11.44	4.22	32.83
Ghana	Sub-Saharan Africa	Lower middle income	5,016.03	-139.70	-802.42	2,362.63	71.05	5.15	6.45	1.46	4.43
Guinea	Sub-Saharan Africa	Low income	-466.39	-40.84	-139.49	-164.71	72.00	4.91	0.68	1.81	0.48
Gambia, The	Sub-Saharan Africa	Low income	-75.88	-9.73	-32.06	-53.47	55.07	5.53	13.64	9.67	42.93
Grenada	Latin America & Caribbean	Upper middle income	-77.83	-3.53	-32.35	-48.45	108.90	14.39	4.82	6.61	84.37
Guatemala	Latin America & Caribbean	Upper middle income	-2,758.84	-164.51	-723.37	378.43	50.79	1.41	12.45	0.47	8.17

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Guyana	Latin America & Caribbean	Upper middle income	-615.91	-2.56	-353.68	-49.00	102.17	15.50	7.03	2.01	4.21
Honduras	Latin America & Caribbean	Lower middle income	-1,626.44	-68.29	-537.97	-686.96	106.28	4.44	19.94	0.35	7.63
Indonesia	East Asia & Pacific	Lower middle income	10,625.39	-2,799.26	-6,143.77	-10.86	37.50	1.78	1.00	0.13	6.95
India	South Asia	Lower middle income	-108,139.52	53.42	-5,716.00	4628.98	40.11	1.88	2.93	0.40	5.01
Iran, Islamic Rep.	Middle East & North Africa	Lower middle income	65,967.77	9.68	3,548.20	238.42	38.09	0.75	0.43	3.45	5.14
Iraq	Middle East & North Africa	Upper middle income	75,927.37	-562.01	-10,342.30	-646.67	71.34	-2.72	0.48	0.97	4.07
Jamaica	Latin America & Caribbean	Upper middle income	-1,420.70	-66.87	-343.69	-439.47	84.04	5.03	17.48	0.83	48.06
Jordan	Middle East & North Africa	Upper middle income	-3,318.34	-203.00	-890.55	-921.60	90.90	3.07	10.79	40.98	35.07
Kazakhstan	Europe & Central Asia	Upper middle income	37,157.72	951.16	3,182.35	-1,551.40	57.69	4.23	0.27	20.12	3.73
Kenya	Sub-Saharan Africa	Lower middle income	-2,871.72	-500.96	-1,247.67	-289.71	35.78	1.19	2.63	2.35	15.12
Kyrgyz Republic	Europe & Central Asia	Lower middle income	-580.97	-36.98	-345.26	-298.71	103.60	4.32	29.64	3.44	18.00

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Cambodia	East Asia & Pacific	Lower middle income	-2,368.04	-4.92	-1,424.75	-1,014.30	154.18	12.61	5.79	0.47	22.12
Kiribati	East Asia & Pacific	Lower middle income	-13.46	No registered wheat and meslin trade	-4.60	-19.72	122.39	0.24	9.19	2.80	17.56
Lao PDR	East Asia & Pacific	Lower middle income	411.87	0.16	-277.07	-366.63	73.47	6.63	1.34	0.33	12.05
Lebanon	Middle East & North Africa	Upper middle income	-6,479.97	-121.45	-552.98	-843.25	96.86	5.30	15.13	34.15	39.73
Libya	Middle East & North Africa	Upper middle income	26,456.01	-234.42	-273.79	-1,521.37	95.60	0.00	0.00	12.28	0.34
St. Lucia	Latin America & Caribbean	Upper middle income	-101.30	-0.01	-29.92	-63.02	100.24	4.90	2.37	6.90	85.05
Sri Lanka	South Asia	Lower middle income	-3,096.42	-310.50	-1,436.56	-195.28	49.14	1.13	8.44	0.19	22.72
Lesotho	Sub-Saharan Africa	Lower middle income	-187.65	-19.09	-46.03	-150.31	153.04	3.17	22.04	0.31	1.92
Morocco	Middle East & North Africa	Lower middle income	-7,492.85	-960.00	-3,405.32	-125.97	86.42	2.29	6.23	0.26	21.06
Moldova	Europe & Central Asia	Upper middle income	-634.79	97.14	-390.29	-24.63	95.52	2.28	17.12	3.51	13.20
Madagascar	Sub-Saharan Africa	Low income	-537.26	-11.66	358.89	-85.69	64.27	3.59	2.96	0.13	20.06

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Maldives	South Asia	Upper middle income	-465.93	-0.04	-240.96	-155.32	140.67	11.18	0.09	25.87	83.62
Mexico	Latin America & Caribbean	Upper middle income	-15,997.62	-942.30	-18,210.70	8,132.92	77.81	2.97	2.95	0.94	4.63
North Macedonia	Europe & Central Asia	Upper middle income	-822.04	-22.21	-61.23	6.09	145.05	3.50	2.86	6.29	4.95
Mali	Sub-Saharan Africa	Low income	-1,448.80	-94.26	-253.35	-270.50	66.77	2.83	5.90	2.06	5.91
Myanmar	East Asia & Pacific	Lower middle income	730.63	-130.26	-563.67	-1,042.94	60.78	4.53	3.55	0.14	14.62
Montenegro	Europe & Central Asia	Upper middle income	-218.66	-8.03	-132.62	-274.57	103.84	10.24	11.20	13.19	47.35
Mongolia	East Asia & Pacific	Lower middle income	2,126.30	-44.33	-464.06	-382.28	113.71	3.60	3.06	0.60	5.61
Mozambique	Sub-Saharan Africa	Low income	431.70	-195.73	516.78	105.28	103.03	19.37	1.68	0.80	4.14
Mauritania	Sub-Saharan Africa	Lower middle income	-512.54	-147.83	-312.70	3.67	87.20	5.34	0.82	3.40	1.03
Mauritius	Sub-Saharan Africa	Upper middle income	-1,020.62	-48.35	-292.74	81.18	94.00	2.90	2.00	2.25	32.89
Malawi	Sub-Saharan Africa	Low income	-231.76	-51.86	-231.71	479.84	47.72	1.55	1.38	1.25	3.60

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Malaysia	East Asia & Pacific	Upper middle income	4,653.89	-384.02	-3,561.70	281.56	148.06	2.80	0.49	8.29	7.97
Namibia	Sub-Saharan Africa	Upper middle income	-914.93	-35.37	-1,396.21	-423.12	118.12	1.95	0.49	3.82	9.20
Niger	Sub-Saharan Africa	Low income	90.18	-4.44	-173.23	-203.81	37.97	3.87	2.39	0.95	7.30
Nigeria	Sub-Saharan Africa	Lower middle income	39,297.25	-1,266.27	57.43	-1,402.27	28.17	0.56	5.06	0.66	2.47
Nicaragua	Latin America & Caribbean	Lower middle income	-930.64	-32.80	-334.83	-92.16	108.88	5.73	11.45	0.66	9.47
Nepal	South Asia	Lower middle income	-2,160.82	-54.59	-1,547.30	-347.68	46.35	0.41	25.29	1.82	24.33
Pakistan	South Asia	Lower middle income	-14,015.40	0.79	-4,004.24	430.89	31.06	0.75	7.57	1.92	2.98
Panama	Latin America & Caribbean	Upper middle income	-1,983.68	-33.42	-951.38	-1,014.35	81.11	5.98	0.88	4.70	21.82
Peru	Latin America & Caribbean	Upper middle income	-2,796.00	-512.44	324.88	1,664.51	46.41	3.03	1.46	0.29	7.92
Philippines	East Asia & Pacific	Lower middle income	-13,088.78	-1,303.52	-5,533.77	-3,810.47	65.48	2.43	9.70	0.21	8.89
Papua New Guinea	East Asia & Pacific	Lower middle income	-1,303.56	-48.68	-729.82	-121.09	61.59	-0.16	0.01	0.34	0.07

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Paraguay	Latin America & Caribbean	Upper middle income	-66.66	82.38	-523.51	144.77	58.48	1.46	1.71	2.36	2.55
Romania	Europe & Central Asia	Upper middle income	-4,482.27	1,095.03	-3,112.04	-1,795.13	89.93	2.67	3.08	1.16	3.32
Rwanda	Sub-Saharan Africa	Low income	-520.36	-52.63	-260.42	-147.05	55.23	2.56	2.35	3.80	25.12
Sudan	Sub-Saharan Africa	Low income	-849.75	-1,691.72	-412.11	-833.09	48.05	3.10	1.14	1.25	19.88
Senegal	Sub-Saharan Africa	Lower middle income	-1,274.36	-183.42	-571.45	-157.01	61.31	3.64	10.37	1.74	10.47
Solomon Islands	East Asia & Pacific	Lower middle income	-80.01	-5.92	-53.38	0.71	88.13	2.05	1.44	0.44	11.09
Sierra Leone	Sub-Saharan Africa	Low income	-13.63	-0.01	-87.39	-58.74	62.79	7.33	1.33	1.41	5.28
El Salvador	Latin America & Caribbean	Lower middle income	-1,501.43	-85.41	-479.70	-109.78	82.45	1.92	20.49	0.69	17.04
Serbia	Europe & Central Asia	Upper middle income	-2,349.29	65.78	-69.22	360.64	110.39	6.85	8.13	9.12	7.33
São Tomé and Príncipe	Sub-Saharan Africa	Lower middle income	-32.76	0.00	-6.23	-14.31	75.47	7.68	4.19	1.26	71.43
Suriname	Latin America & Caribbean	Upper middle income	-224.28	-7.65	-128.68	-128.92	113.75	3.11	2.01	8.63	3.28

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
Eswatini	Sub-Saharan Africa	Lower middle income	-280.89	-13.89	-96.04	408.96	88.11	0.80	2.73	2.45	0.71
Syrian Arab Republic	Middle East & North Africa	Low income	2212.40	-236.75	-1990.29	-780.87	40.15	1.25	0.64	4.73	32.17
Togo	Sub-Saharan Africa	Low income	-119.41	-17.88	-120.57	-71.84	68.07	2.91	6.72	3.79	15.07
Thailand	East Asia & Pacific	Upper middle income	-26,061.57	-681.08	-16,078.64	15,328.53	120.39	1.23	1.51	5.76	16.20
Tajikistan	Europe & Central Asia	Lower middle income	-557.81	-222.78	-105.59	-272.42	62.64	3.02	27.75	3.24	14.43
Timor-Leste	East Asia & Pacific	Lower middle income	-119.80	-0.05	-32.36	-84.10	71.07	2.32	5.54	0.91	61.60
Tunisia	Middle East & North Africa	Lower middle income	-2,781.64	-477.31	-1,152.76	-176.44	95.65	1.86	4.66	0.50	10.53
Turkey	Europe & Central Asia	Upper middle income	-33,283.83	-2,254.01	-4,444.84	3,260.42	57.65	1.50	0.13	3.77	13.96
Tanzania	Sub-Saharan Africa	Lower middle income	-1,876.17	-4.92	-927.13	96.88	35.72	1.91	0.72	0.49	26.54
Uganda	Sub-Saharan Africa	Low income	-1,072.53	-171.82	-421.47	83.32	41.90	2.69	3.57	1.92	20.06
Uzbekistan	Europe & Central Asia	Lower middle income	1,516.58	-342.84	-1,617.53	-604.94	52.13	2.33	10.70	3.92	6.65

ODI Emerging Analysis

Economy	Region	Income group	Net fuel trade (export-import) (\$ million), as of 2019 or latest data	Net wheat trade (export-import), (\$ million), as of 2019 or latest data	Net metal trade (export-import), (\$ million), as of 2019 or latest data	Net food trade (export-import), (\$ million), as of 2019 or latest data	Trade in goods and services (% of GDP, ave. 2015–2020 or latest data)	FDI inflows (% of GDP, ave. 2015–2020 or latest data)	Personal remittances (% of GDP, ave. 2015–2020, or latest data)	Migrants (% of population, 2015)	Tourism receipt (% of total exports, ave. 2015–2020 or latest data)
St. Vincent and the Grenadines	Latin America & Caribbean	Upper middle income	-39.52	-8.05	-18.41	-37.09	93.69	10.89	6.66	4.18	69.44
Venezuela, RB	Latin America & Caribbean		85,544.96	-419.14	-3,866.80	-2,714.07	38.65	0.67	0.03	4.51	1.79
Vietnam	East Asia & Pacific	Lower middle income	-11,913.15	-711.09	-13,583.75	-510.04	200.86	6.14	6.60	0.08	3.64
Vanuatu	East Asia & Pacific	Lower middle income	-51.13	0.00	-16.41	-31.43	101.37	4.11	8.22	1.20	71.36
Samoa	East Asia & Pacific	Lower middle income	-56.92	0.00	-27.60	-31.57	86.35	1.19	18.47	2.55	54.38
Yemen, Rep.	Middle East & North Africa	Low income	-1,340.08	-432.81	-265.82	-588.21	42.04	-1.03	9.97	1.28	9.29
South Africa	Sub-Saharan Africa	Upper middle income	-6,032.63	-349.99	5,283.06	1,063.51	59.68	0.89	0.23	5.77	8.11
Zambia	Sub-Saharan Africa	Lower middle income	-1,182.01	-1.52	4,605.68	201.57	76.64	2.97	0.39	0.79	8.79
Zimbabwe	Sub-Saharan Africa	Lower middle income	-1,417.45	-51.36	439.72	823.02	57.23	1.92	9.08	2.56	3.89

Table A3. Resilience

Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Thresholds			< -3	< -3	< 3	>50	In high risk of debt distress or in debt distress	> 2	< 20	>10	<0
Afghanistan	South Asia	Low income	-2.24	11.16	16.63	14.95	High	0.15	20.27	20.40	-1.52
Angola	Sub-Saharan Africa	Lower middle income	3.22	7.34	8.03	125.88		14.60	47.82	16.30	-1.18
Albania	Europe & Central Asia	Upper middle income	-6.69	-8.64	9.16	74.19		-0.55	38.63	6.70	-0.14
Argentina	Latin America & Caribbean	Upper middle income	-8.63	0.99	7.14	66.94		18.64	9.39	-52.70	-0.22
Armenia	Europe & Central Asia	Upper middle income	-4.04	-2.88	5.53	105.21		3.65	10.75	8.50	-0.12
Azerbaijan	Europe & Central Asia	Upper middle income	-1.83	7.82	5.13	37.33		1.20	2.31	5.10	-0.17
Burundi	Sub-Saharan Africa	Low income	-7.19	-15.41	0.89	21.92	High	-3.40	91.17	13.70	-1.26
Benin	Sub-Saharan Africa	Lower middle income	-4.50	-4.01	5.50	33.90	Moderate	1.00	49.94	18.50	-0.26

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Burkina Faso	Sub-Saharan Africa	Low income	-5.60	-2.53	5.50	26.97	Moderate	1.00	72.71	3.90	-0.67
Bangladesh	South Asia	Lower middle income	-5.94	-1.07	8.60	19.99	Low	0.04	34.22	13.60	-0.79
Bulgaria	Europe & Central Asia	Upper middle income	-3.68	0.52	10.94	63.23		-0.11	17.82	-4.40	-0.07
Bosnia and Herzegovina	Europe & Central Asia	Upper middle income	-3.25	-3.87	10.11	72.13		0.35	25.28	8.90	-0.98
Belarus	Europe & Central Asia	Upper middle income	-3.88	0.39	2.31	73.58		4.64	6.82	-2.50	-0.73
Belize	Latin America & Caribbean	Lower middle income	-7.68	-8.24	4.31	96.73		1.10	32.73	-16.20	-0.65
Bolivia	Latin America & Caribbean	Lower middle income	-9.19	-2.22	7.08	42.67		-2.70	8.20	-7.90	-0.56
Brazil	Latin America & Caribbean	Upper middle income	-6.16	-0.52	14.91	38.76		3.89	43.74	-35.30	-0.45
Bhutan	South Asia	Lower middle income	-9.60	-8.79	13.26	132.05	Moderate	1.74	86.68	8.10	0.37
Botswana	Sub-Saharan Africa	Upper middle income	-5.03	-4.04	7.66	10.58		2.15	28.23	7.20	0.26

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Central African Republic	Sub-Saharan Africa	Low income	-3.29	-6.88	3.10	38.08	High	1.14	84.23	15.10	-1.69
China	East Asia & Pacific	Upper middle income	-7.54	1.64	14.87	16.07		-1.73	12.25	2.40	0.65
Côte d'Ivoire	Sub-Saharan Africa	Lower middle income	-5.57	-3.83	5.50	42.16	Moderate	1.00	64.83	0.30	-0.48
Cameroon	Sub-Saharan Africa	Lower middle income	-2.75	-2.83	3.10	34.73	High	0.20	78.04	14.40	-0.88
Congo, Dem. Rep.	Sub-Saharan Africa	Low income	-1.67	-2.07	0.56	12.94	Moderate	4.39	95.82	14.50	-1.69
Congo, Rep.	Sub-Saharan Africa	Lower middle income	1.50	12.12	3.10	61.09	In distress	-0.65	64.15	12.30	-1.43
Colombia	Latin America & Caribbean	Upper middle income	-8.44	-4.38	11.53	58.31		0.17	31.60	5.40	0.04
Comoros	Sub-Saharan Africa	Lower middle income	-4.24	-4.14	10.18	24.54	High	-3.15	64.17	29.20	-1.59
Cabo Verde	Sub-Saharan Africa	Lower middle income	-9.07	-13.24	8.21	124.56	High	-0.10	26.35	22.10	0.25
Costa Rica	Latin America & Caribbean	Upper middle income	-6.39	-2.96	4.01	53.68		-1.66	38.33	-15.30	0.36

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Djibouti	Middle East & North Africa	Lower middle income	-1.74	-4.70	2.30	81.52	High	-0.85	28.18	-16.60	-0.68
Dominican Republic	Latin America & Caribbean	Upper middle income	-4.52	-2.00	5.33	59.30		3.85	15.01	6.80	-0.33
Algeria	Middle East & North Africa	Lower middle income	-9.25	-7.63	15.43	3.64		0.97	0.06	16.50	-0.53
Ecuador	Latin America & Caribbean	Upper middle income	-2.32	1.71	3.46	58.54		-1.71	13.07	-31.10	-0.44
Egypt, Rep.	Arab Middle East & North Africa	Lower middle income	-7.33	-3.88	5.56	37.18		-2.72	5.12	10.00	-0.55
Ethiopia	Sub-Saharan Africa	Low income	-2.98	-2.87	2.05	28.36	High	15.92	91.56	6.40	-0.55
Fiji	East Asia & Pacific	Upper middle income	-15.81	-15.66	7.70	35.68		-1.90	32.67	2.60	0.30
Micronesia, Federated States	East Asia & Pacific	Lower middle income	1.29	1.17	2.80	16.70	High	0.55	1.45	-2.60	-0.08
Gabon	Sub-Saharan Africa	Upper middle income	-2.49	-3.79	3.10	52.51		-1.00	81.93	15.10	-0.91
Georgia	Europe & Central Asia	Upper middle income	-6.49	-9.96	4.40	132.97		6.28	28.15	6.60	0.79

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Ghana	Sub-Saharan Africa	Lower middle income	-14.50	-2.23	3.30	44.26	High	0.48	44.05	6.90	-0.15
Guinea	Sub-Saharan Africa	Low income	-2.35	-8.50	2.77	29.12	Moderate	3.60	76.23	13.20	-0.89
Gambia, The	Sub-Saharan Africa	Low income	-4.11	-12.70	6.39	42.22	High	1.28	52.91	19.50	-0.67
Grenada	Latin America & Caribbean	Upper middle income	0.47	-22.81	5.21	62.55	In distress	0.71	12.28	18.10	-0.07
Guatemala	Latin America & Caribbean	Upper middle income	-2.27	4.26	10.20	32.98		0.61	63.39	-7.80	-0.69
Guyana	Latin America & Caribbean	Upper middle income	-7.20	-16.78	2.05	32.68	Moderate	-0.27	24.95	-5.80	-0.44
Honduras	Latin America & Caribbean	Lower middle income	-4.16	-3.03	8.34	49.97	Low	0.57	52.68	-4.60	-0.60
Indonesia	East Asia & Pacific	Lower middle income	-6.12	-0.27	8.41	40.54		-1.58	26.95	-9.90	0.37
India	South Asia	Lower middle income	-11.27	-1.03	12.93	21.41		1.48	34.40	-1.80	0.39
Iran, Rep.	Islamic Middle East & North Africa	Lower middle income	-6.45	1.29	2.60	2.69		10.34	0.91	6.50	-0.99

ODI Emerging Analysis

Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Iraq	Middle East & North Africa	Upper middle income	-1.55	6.16	11.36	48.50		4.94	0.80	20.40	-1.33
Jamaica	Latin America & Caribbean	Upper middle income	0.07	-1.59	7.09	135.01		1.01	11.80	12.80	0.41
Jordan	Middle East & North Africa	Upper middle income	-7.69	-8.93	8.40	87.25		-0.86	3.23	12.40	0.11
Kazakhstan	Europe & Central Asia	Upper middle income	-2.98	-0.87	6.88	104.40		2.93	1.71	0.20	0.16
Kenya	Sub-Saharan Africa	Lower middle income	-8.01	-5.04	5.60	38.45	High	0.98	72.03	6.90	-0.35
Kyrgyz Republic	Europe & Central Asia	Lower middle income	-3.67	-7.70	7.80	117.43	Moderate	8.03	23.30	5.30	-0.54
Cambodia	East Asia & Pacific	Lower middle income	-3.75	-21.32	10.32	70.82	Low	-0.19	64.92	1.10	-0.42
Kiribati	East Asia & Pacific	Lower middle income	-11.34	15.32	More than 3 months of recurring spending	23.00	High	0.73	45.82	18.40	-0.14
Lao PDR	East Asia & Pacific	Lower middle income	-5.49	-6.24	2.42	94.78	High	1.80	53.90	4.40	-0.77
Lebanon	Middle East & North Africa	Upper middle income	-3.23	-17.79	28.96	222.11		82.27	4.17	10.60	-1.17

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Libya	Middle East & North Africa	Upper middle income	6.77	19.23	39.25	5.80		14.61	2.89	17.70	-2.01
St. Lucia	Latin America & Caribbean	Upper middle income	-7.46	-13.47	3.78	48.23		0.44	11.52	10.80	0.15
Sri Lanka	South Asia	Lower middle income	-10.51	-3.17	3.30	71.78		0.12	52.89	6.60	-0.07
Lesotho	Sub-Saharan Africa	Lower middle income	-4.84	-13.28	3.92	50.15	Moderate	0.33	44.94	15.30	-0.91
Morocco	Middle East & North Africa	Lower middle income	-6.49	-3.07	8.89	58.11		-0.60	11.21	-2.00	-0.03
Moldova	Europe & Central Asia	Upper middle income	-4.33	-8.45	7.09	68.43	Low	-2.03	24.72	-8.20	-0.46
Madagascar	Sub-Saharan Africa	Low income	-6.43	-5.83	5.59	38.46		0.24	79.97	8.20	-1.00
Maldives	South Asia	Upper middle income	-18.05	-15.90	4.27	96.91	High	-1.03	1.38	6.30	-0.11
Mexico	Latin America & Caribbean	Upper middle income	-4.25	0.04	5.22	45.08		2.37	9.19	-0.50	-0.16
North Macedonia	Europe & Central Asia	Upper middle income	-5.92	-2.06	5.27	89.93		1.12	23.96	4.00	0.14

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Mali	Sub-Saharan Africa	Low income	-5.50	-5.28	5.50	36.31	Moderate	1.38	79.93	7.40	-1.15
Myanmar	East Asia & Pacific	Lower middle income	-7.79	-0.81	3.29	17.18	Low	-2.34	70.66	-10.60	-1.00
Montenegro	Europe & Central Asia	Upper middle income	-4.98	-20.96	8.10	200.64		0.38	42.96	16.70	-0.02
Mongolia	East Asia & Pacific	Lower middle income	-5.60	-8.52	6.10	275.75		-2.15	3.55	5.50	-0.34
Mozambique	Sub-Saharan Africa	Low income	-7.34	-33.98	5.53	154.41	In distress	0.22	80.65	6.40	-0.72
Mauritania	Sub-Saharan Africa	Lower middle income	-0.24	-7.14	4.64	73.13	High	-1.34	28.60	-13.80	-0.77
Mauritius	Sub-Saharan Africa	Upper middle income	-8.99	-18.59	7.96	155.66		2.31	11.49	5.20	0.87
Malawi	Sub-Saharan Africa	Low income	-8.20	-15.81	2.05	24.79		2.33	80.84	4.00	-0.79
Malaysia	East Asia & Pacific	Upper middle income	-5.89	3.81	6.29	69.30		0.28	3.41	-3.40	1.04
Namibia	Sub-Saharan Africa	Upper middle income	-9.79	-7.29	5.40	81.70		-1.46	28.82	-4.30	0.05

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Niger	Sub-Saharan Africa	Low income	-6.60	-15.39	5.50	34.89	Moderate	0.90	78.88	11.60	-0.62
Nigeria	Sub-Saharan Africa	Lower middle income	-6.11	-3.22	5.54	16.94		5.60	82.30	9.50	-1.03
Nicaragua	Latin America & Caribbean	Lower middle income	-2.95	4.15	6.07	98.31	Moderate	-0.54	50.00	-8.80	-0.71
Nepal	South Asia	Lower middle income	-4.56	-8.30	12.48	23.21	Low	-2.40	85.04	15.30	-0.94
Pakistan	South Asia	Lower middle income	-7.07	-0.61	3.92	45.31		0.59	45.88	1.70	-0.55
Panama	Latin America & Caribbean	Upper middle income	-7.39	-3.69	5.62	208.13		-0.48	21.90	-1.90	0.07
Peru	Latin America & Caribbean	Upper middle income	-5.44	0.40	17.88	37.56		1.19	27.44	-8.20	-0.24
Philippines	East Asia & Pacific	Lower middle income	-7.62	0.39	12.25	25.30		1.19	25.87	5.00	0.06
Papua Guinea	New East Asia & Pacific	Lower middle income	-7.14	22.16	7.60	73.66	High	-1.50	50.68	-29.90	-0.85
Paraguay	Latin America & Caribbean	Upper middle income	-5.21	3.49	9.39	57.13		-0.22	60.51	-42.20	-0.47

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Romania	Europe & Central Asia	Upper middle income	-6.70	-5.71	5.46	58.16		1.43	23.69	0.50	-0.22
Rwanda	Sub-Saharan Africa	Low income	-3.90	-13.42	5.71	81.14	Moderate	-2.60	86.72	11.60	0.34
Sudan	Sub-Saharan Africa	Low income	-2.88	-10.07	0.30	115.59	In distress	127.36	63.00	6.70	-1.49
Senegal	Sub-Saharan Africa	Lower middle income	-5.40	-12.19	5.50	71.69	Moderate	0.94	39.93	3.80	0.01
Solomon Islands	East Asia & Pacific	Lower middle income	-2.76	-5.80	13.75	27.12	Moderate	-3.59	48.65	3.40	-0.91
Sierra Leone	Sub-Saharan Africa	Low income	-3.78	-15.89	4.70	53.03	High	0.25	78.46	19.90	-1.02
El Salvador	Latin America & Caribbean	Lower middle income	-5.05	-2.84	3.01	78.60		2.47	21.03	8.70	-0.36
Serbia	Europe & Central Asia	Upper middle income	-6.51	-4.09	6.13	74.39		0.54	21.33	-6.20	0.03
São Tomé and Príncipe	Sub-Saharan Africa	Lower middle income	-1.46	-11.28	5.52	61.91	In distress	1.47	40.23	23.10	-0.64
Suriname	Latin America & Caribbean	Upper middle income	-8.19	3.40	3.03	164.60		49.69	11.59	3.90	-0.54

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Eswatini	Sub-Saharan Africa	Lower middle income	-7.99	1.42	2.96	21.43		-0.56	66.59	-12.70	-0.77
Syrian Republic	Arab Middle East & North Africa	Low income	-24.00	-35.00	1.00	80.80		Proxy: 200 inflation rate as of 2020	0.61	8.90	-1.73
Togo	Sub-Saharan Africa	Low income	-6.02	-2.68	5.50	33.54	Moderate/high	0.75	81.04	2.80	-0.69
Thailand	East Asia & Pacific	Upper middle income	-6.91	-0.49	12.06	41.89		-0.34	22.65	-7.80	0.30
Tajikistan	Europe & Central Asia	Lower middle income	-2.70	1.94	6.90	71.12	High	1.29	48.11	10.30	-0.71
Timor-Leste	East Asia & Pacific	Lower middle income	-44.14	-31.92	8.66	9.73	Moderate	-2.05	18.35	22.40	-0.80
Tunisia	Middle East & North Africa	Lower middle income	-8.25	-7.32	5.55	101.13		0.51	12.50	2.00	-0.20
Turkey	Europe & Central Asia	Upper middle income	-4.92	-2.42	4.57	61.29		4.57	13.34	-2.20	-0.04
Tanzania	Sub-Saharan Africa	Lower middle income	-3.27	-3.24	6.40	41.25	Moderate	-1.24	83.49	-2.50	-0.77
Uganda	Sub-Saharan Africa	Low income	-5.94	-8.89	3.90	46.54	Moderate	-2.53	91.07	-2.40	-0.58

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Economy	Region	Income group	Fiscal balance (% of GDP, IMF estimate for 2021 or latest data)	Current account balance (% of GDP, IMF estimate for 2021 or latest data)	Foreign currency reserves (months of imports, 2020 or latest data)	External debt stock (% of gross national income)	Overall debt distress or external debt distress	Inflationary pressure (pp deviation from pre-Covid IMF forecast)	Renewable energy consumption (% of total final energy consumption, 2015)	Net food imports (imports less exports) (% of total imports, ave. 2015–2019)	Government effectiveness index, 2020
Uzbekistan	Europe & Central Asia	Lower middle income	-3.52	-6.05	17.21	53.86	Low	0.35	1.67	1.00	-0.51
St. Vincent and the Grenadines	Latin America & Caribbean	Upper middle income	-11.78	-21.52	6.42	50.17	High	-0.04	4.30	17.00	0.15
Venezuela, RB	Latin America & Caribbean		-5.05	0.29	3.65	0.56		-497300	15.33	14.30	-1.78
Vietnam	East Asia & Pacific	Lower middle income	-4.72	1.82	3.98	48.93		-1.77	30.72	-1.40	0.20
Vanuatu	East Asia & Pacific	Lower middle income	-3.48	-6.89	18.12	46.92	Moderate	3.10	35.54	9.30	-0.46
Samoa	East Asia & Pacific	Lower middle income	-0.65	-13.01	8.12	56.31	High	-5.64	37.48	17.30	0.52
Yemen, Rep.	Middle East & North Africa	Low income	-5.23	-8.76	less than 1 month	32.59		35.75	2.42	32.50	-2.31
South Africa	Sub-Saharan Africa	Upper middle income	-8.44	2.88	7.13	51.78		-0.89	10.29	-3.00	0.30
Zambia	Sub-Saharan Africa	Lower middle income	-8.53	13.52	2.26	170.70	High	14.80	85.49	-1.10	-0.77
Zimbabwe	Sub-Saharan Africa	Lower middle income	-0.05	4.89	0.07	73.02	In distress	88.84	81.43	-14.02	-1.25

Appendix 2 Data sources

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
1. Exports of goods to Russia (% of total goods exports)	Annual average	2015–2020 or latest available data	WITS	Greater than 10%	Used latest available data for: Bhutan (2012), Gabon (2004–2009), Libya (2018), Papua New Guinea (2011–2012), Sierra Leone (2015–2017), Suriname (2015–2019), Syria (2005–2010), St. Vincent and the Grenadines (2014–2019), Venezuela (2008–2013), Vanuatu (2007–2011); for countries with no record of import/export data, it is assumed that no or very low trade transaction has taken place (i.e. below threshold set for the vulnerability index).
2. Exports of goods to Ukraine (% of total goods exports)	Annual average	2015–2020 or latest available data	WITS	Greater than 10%	Used latest available data for Central African Republic (2010–2013), Djibouti (2009), Gabon (2004–2009), Grenada (2013), Libya (2016–2018), Papua New Guinea (2011–2012), Suriname (2015–2019), Syria (2005–2010), St. Vincent and the Grenadines (2014–2019), Venezuela (2008–2013), Vanuatu (2007–2011).
3. Imports of goods from Russia (% of total goods imports)	Annual average	2015–2020 or latest available data	WITS	Greater than 10%	Used latest available data for Djibouti (2009), Gabon (2004–2009), Libya (2016–2018), Papua New Guinea (2011–2012), São Tomé and Príncipe (2017–2020), Suriname (2015–2019), Syria (2005–2010), St. Vincent and the Grenadines (2014–2019), Venezuela (2008–2013), Vanuatu (2007–2011), Iraq (2014).

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
4. Imports of goods from Ukraine (% of total goods imports)	Annual average	2015–2020 or latest available data	WITS	Greater than 10%	Used latest available data for Djibouti (2009), Gabon (2004–2009), Grenada (2013), Libya (2016–2018), Papua New Guinea (2011–2012), São Tomé and Príncipe (2016–2018), Suriname (2015–2019), Syria (2005–2010), St. Vincent and the Grenadines (2014–2019), Venezuela (2008–2013), Vanuatu (2007–2011), Iraq (2014).
5. Total trade with Russia (goods exports+imports as % of GDP)	Annual average	2015–2020 or latest available data	UNCTAD for trade data; WDI for GDP data	Greater than 10%	Used latest data for Gabon (2004–2009), Libya (2018), Papua New Guinea (2011–2012), Sierra Leone (2017), Suriname (2015–2019), Syria (2005–2010), St. Vincent and the Grenadines (2014–2019), Venezuela (2008–2013), Vanuatu (2007–2011); for Cabo Verde, used imports data (no registered exports to Russia since 2007); for Djibouti, used latest available import data (no registered exports to Russia since 2002); for The Gambia, used imports data (no registered exports to Russia since 2014); for Kiribati, used only data on exports to Russia (no registered imports from Russia since 2002); for Lesotho, used only data on imports from Russia (no registered exports to Russia since 2012); for São Tomé and Príncipe, used only latest data on imports from Russia (2017–2020), no registered exports to Russia since 2002; for Iraq, used only latest imports from Russia (2014), no registered exports to Russia.
6. Total trade with Ukraine (goods exports+imports as % of GDP)	Annual average	2015–2020 or latest available data	UNCTAD for trade data; WDI for GDP data	Greater than 10%	Used latest data for Central African Republic (2010–2013), Djibouti (2009), Gabon (2004–2009), Grenada (2013), Libya (2016–2018), Papua New Guinea (2011–2012), Suriname (2015–2019), Syria (2005–2010), St. Vincent and the Grenadines (2014–2019), Venezuela (2008–2013), Vanuatu (2007–2011); for Cameroon, used imports data (no registered export to Ukraine since 2007); for Cabo Verde, used imports data (no registered exports to Ukraine since 2007); for The Gambia, used imports data (no registered exports to Ukraine since 2002); for Jamaica, used exports data (no registered imports from Ukraine since

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
					2009); for Kiribati, used only data on import from Ukraine (no registered exports to Ukraine since 2002); for Panama, used only data on import from Ukraine (no registered exports to Ukraine since 2012); for São Tomé and Príncipe, used only latest data on imports from Ukraine (2016–2018), no registered exports to Ukraine since 2002; for Iraq, used only latest imports from Ukraine (2014), no registered exports to Ukraine.
7. Russian outward FDI (% of total FDI, average 2015–2020)	End-year Russian outward FDI to destination country as % of destination country's total inward FDI	2015 to 2020	Central Bank of Russia for data on FDI of Russia abroad UNCTAD database for inward FDI stock	Greater than 10%	
8. Migrants to Russia (% of total migrants, 2017)		2017	World Bank database	Greater than 10%	
9. Migrants to Ukraine (% of total migrants, 2017)		2017	World Bank database	Greater than 10%	
10. Net fuel trade (export-import) (2019 \$ million)		2019 or latest available data	WITS		Used latest available data with both exports and imports for: Algeria and Solomon Islands (2017), Bangladesh, Mauritania (2015), Bhutan (2012), Djibouti and Gabon (2009), Guinea (2016), Iraq (2014) Kiribati, Libya, Nepal, Sudan (2018), Papua New Guinea (2012), Syria (2010), Venezuela (2013), Vanuatu (2011); for Cabo Verde, used imports data (no registered fuel export since 2007, except \$398 fuel exports in 2011); for Micronesia, used latest import data as of 2013 (no registered fuel exports since 2002).

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
11. Net wheat trade (export-import) (2019 \$ million)		2019 or latest available data	WITS		<p>Used latest available data with both exports and imports for: Afghanistan, Botswana, Kiribati, Mali, Malawi, Mongolia, Solomon Islands, Sudan, Samoa, Tunisia, Yemen (2018), Albania, Belize, Eswatini, The Gambia, Guinea, Nepal, Zambia (2016), Algeria, Dem. Rep. of Congo, Libya, Philippines (2017), Benin (2013), Burkina Faso (2012), Bangladesh, Montenegro, Niger, Pakistan (2015), Djibouti and Gabon (2009), Bhutan, Vanuatu (2011), Jamaica (2013), Mauritius, Suriname (2014), Papua New Guinea (2012), Syria (2010), Venezuela (2009).</p> <p>Used 2019 import data only for Bolivia (no registered wheat exports since 2008); Cambodia (no registered wheat exports since 2008), Madagascar (no registered wheat exports since 2003); Maldives (no registered wheat exports since 2004), Tajikistan and Grenada (no registered wheat exports since 2002); Comoros (2017 import data; no registered what exports since 2008); used 2019 import data only for Ecuador (no registered wheat export since 2012 except for \$32 in 2014); used 2020 data for Republic of Congo (the authors opted to use 2020 despite the Covid-19 context since the latest available data before 2020 is outdated (2011)); for Micronesia, used latest import data as of 2013 (no registered wheat exports since 2002); for Iraq, used latest import data as of 2014, no registered wheat exports).</p>
12. Net metal trade (export-import) (2019 \$ million)		2019 or latest available data	WITS		<p>Used latest available data with both exports and imports for: Algeria (2017), Bangladesh (2015); Bhutan (2012), Djibouti and Gabon (2009), Micronesia (2013), Guinea (2016), Kiribati, Libya, Solomon Islands, Sudan (2018), Syria (2010), Venezuela (2013), Vanuatu (2011); for Iraq, used latest import data as of 2014, no registered metal exports).</p>
13. Net food trade (export-import) (2019 \$ million)		2019 or latest	WITS		<p>Used latest available data with both exports and imports for: Bangladesh (2015); Bhutan (2012), Djibouti and Gabon (2009),</p>

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
		available data			Micronesia (2013), Guinea (2016), Kiribati, Libya, Solomon Islands, Sudan (2018), Syria (2010), Venezuela (2013), Vanuatu (2011), Iraq (2014).
14. Trade in goods and services (% of GDP, average 2015–2020)	Annual average	2015–2020 or latest available data	WDI		Used latest available data for both goods and services trade in Central African Republic (2014–2018), Micronesia (2009–2014), Venezuela (2009–2014); used trade in goods for Iran (no registered trade in services since 2001), Syria (no registered trade in services since 2011); used trade in services for West Bank and Gaza (no data in trade in goods).
15. FDI inflows (% of GDP)	Annual average	2015–2020 or latest available data	WDI		Used latest available data for Micronesia (2014), Syria (2011), Venezuela (2009–2014).
16. Personal remittances (% of GDP)	Annual average	2015–2020 or latest available data	WDI		Used latest available data for Syria, Venezuela (2009–2014).
17. Migrants (% of population, 2015)			World Bank database		
18. Tourism receipt (% of total exports)	Annual average	2015–2020	WDI		Used latest WDI data for Central African Republic (2013), Libya, Syria (2010), Guyana (2003), Jamaica (2011); used average of 2018–2019 data for Belize, Burundi, China, Iran, Lesotho, Nicaragua and Zambia by using international receipt data from UNWTO (2021) and total exports of goods and services data from WDI database; tourism receipt data for Micronesia is based on Currie (2021).
19. General government net lending/borrowing (% of GDP)		Estimate for 2021 or latest data	IMF WEO October 2021		Used latest available IMF estimates for: Afghanistan (2020), Argentina (2020), Lebanon (2020), Venezuela (2020); data for Syria is as of 2015 and is based on (Gobat and Kostial, 2016)

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
20. Current account balance (% of GDP)		Estimate for 2021 or latest data	IMF WEO October 2021		Lebanon (2020); data for Syria is as of 2015 and is based on (Gobat and Kostial, 2016)
21. Foreign currency reserves (months of imports, 2020)					<p>Used latest available data for Burundi (2018), Myanmar, Libya (2019), Venezuela (2016); used IMF (2022a) estimates of 2020 West African Economic and Monetary Union's foreign reserves in months of succeeding year's exports estimates for Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo; used IMF (2022b) estimates of 2020 Central African Economic and Monetary Community's foreign reserves in months of imports of goods and services for Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea and Gabon; for Iran, used 2020 gross reserves data from FRED (2022a) and months of imports of goods and services data from WDI; data for Syria is as of 2015 and is based on (Gobat and Kostial, 2016); data for Fiji is based on IMF (2021b); data for Kenya is based on IMF (2021c); estimated data for Papua New Guinea is based on IMF (2022d); projected data for Sudan is based on IMF (2021e).</p> <p>Used alternative data (government deposits, projected data as of 2018) for Micronesia based on IMF (2019a), data for Jordan is based on IMF (2022c); used alternative data (government cash reserves, projected as of 2019) for Kiribati based on IMF (2019b); estimated data for Sierra Leone excludes swaps, in terms of months of next year's imports and based on IMF (2021f); data for Tajikistan is in months of next year's imports based on IMF (2021g); data for Tanzania is for 2019/20 in months of next year's imports based on IMF (2021h); data for Uganda is in 2019/20 in months of next year's imports based on IMF (2021i); estimate for Yemen is based on report of Barrington and Ghojari (2021).</p>

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
22. External debt stock (% of gross national income)	2020 of latest data		WDI		Used latest data for Yemen (2018); alternative data (external debt as % of GDP) for Micronesia (projected 2020) based on IMF (2019a), Kiribati (estimated 2019) based on IMF (2019b), Libya (2017) based on AfDB (2021), Malaysia (2020 data) based on IMF (2021d), Namibia (2020 data) based on IMF (2021k), Suriname (2020) based on IMF (2021l), Venezuela (2019 data) based on CEIC (2022), Iraq based on FRED (2022b).
23. Overall debt distress or external debt distress	Latest DSA ratings published as of end-December 2021		World Bank website		
24. Inflationary pressure	Percentage points deviation between inflation forecast for 2021 in IMF WEO October 2019 (pre-Covid) and IMF WEO October 2021 (Covid period)		IMF WEO databases in	Higher than 2 percentage points deviation	For Afghanistan, latest forecast for 2021 inflation is based on IMF (2021); for Argentina, deviation was computed between IMF WEO October 2019 forecast of 2021 inflation rate and actual inflation rate for 2021 (50.9%) released by national statistics bureau (see Buenos Aires Times, 2022); for Lebanon, data refers to deviation of actual 2020 inflation from pre-Covid inflation forecast for 2020; for Syria, an alternative data was used (actual inflation rate) at 200% in 2020 based on WFP (2021).
25. Renewable energy consumption (% of total final energy consumption)		2015	WDI	Below 20%	
26. Net food imports (import less exports) (% of total imports)	Annual average (from original source)	2016–2018	UNCTAD (2022)	Greater than 10%	Alternative data used for Zimbabwe based on authors computations of food imports and total goods imports (2015-2019) data from WITS.
27. Government effectiveness index	Reflects perceptions of quality of public	2020	World Bank governance	Less than 0	

Indicator	Data processing	Period covered	Sources of raw data	Threshold set for vulnerability index	Remarks
	<p>services, quality of the civil service and the degree of its independence from political pressures, quality of policy formulation and implementation and credibility of the government's commitment to such policies.</p> <p>Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance).</p>		<p>indicators website</p>		
