





TAKING STOCK JANUARY 2022



**NO TIME TO WASTE**  
***The challenges and opportunities  
of cleaner trade for Vietnam***

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## ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
CBAM	Carbon Border Adjustment Mechanism
CIT	corporate income tax
CO <sub>2</sub>	carbon dioxide
COP 26	26th United Nations Climate Change Conference
CPI	Consumer Price Index
CPTPP	Progressive Agreement for Trans-Pacific Partnership
EAP	East Asia and Pacific
EITE	Prototype Emissions Intensity and Trade Exposure Country Comparison Tool
ESG	Environmental – Social – Governance Commitments
ETS	Emissions Trading Scheme
EU	European Union
FDI	foreign direct investment
FTAS	free trade agreements
GDP	gross domestic product
GHG	greenhouse gas
GTAP	Global Trade Analysis Project
HCMC	Ho Chi Minh City
IP	Industrial Parks
MOF	Ministry of Finance
NPLs	nonperforming loans
NTMs	non-tariff measures
O&M	operations and maintenance
OECD	Organization for Economic Co-operation and Development
PV	photovoltaic
SBV	State Bank of Vietnam
SEDS	2021–2030 Social Economic Development Strategy
UNDP	United Nations Development Programme
UNFCC	United Nations Framework Convention on Climate Change
VAT	value-added tax
WITS	World Integrated Trade Solution
WTO	World Trade Organization
y/y	year on year

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# OVERVIEW

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The 26<sup>th</sup> United Nations Climate Change Conference (COP26) was held in early November 2021 in Glasgow, Scotland, at which Vietnam's Prime Minister, Phạm Minh Chính, pledged once again that Vietnam would be part of the global climate change solution. The country aims to increase the share of clean energy in its total primary energy supply to at least 20 percent by 2030 and 30 percent by 2045 and has pledged to phase out coal-fueled power generation and made a commitment to reach net zero emissions by 2050. Trade can be a central part of the solution to climate change Vietnam is experiencing and will have to deal with in years to come. Green trade—or cleaner trade, trade in environmental or environmentally friendly goods—can help Vietnam achieve not only its climate commitments but also its development ambition to become a high-income economy by 2045 as set out in the 2021–2030 Social Economic Development Strategy (SEDS).

**This issue of Taking Stock, after describing the recent trends in the Vietnamese economy and discussing the short to medium term prospects during these unpredictable COVID-19 times, asks what does global climate change and the commitments by the authorities mean for Vietnamese firms and exports?** How will trade be affected, or better yet, how can trade help? What are the challenges, the required foundations, and the opportunities, and what needs to be done? In an increasingly climate-change-afflicted world, green trade can catalyze technological adaptation, create new jobs, and spur new areas of comparative advantage and growth. It can enable recovery from natural disasters and help ease food insecurity. Such trade comes with opportunities, but also with challenges, as changes in global value chains, trade policies in Vietnam's main destination markets and in the corporate priorities of many multinational companies will affect existing trade and investment flows and, thus, the country's future growth trajectory.

## Chapter 1: Recent economic developments and prospects

*The global economy rebounded in 2021... but faces an uncertain near-term perspective due to the emergence of COVID-19 variants*

**Two years into the COVID-19 crisis, an uneven global recovery is continuing, but its momentum has been hamstrung by various uncertainties and risks.** The global economy is estimated to have grown 5.5 percent in 2021 and is projected to grow 4.2 percent in 2022.<sup>1</sup> The U.S., European Union (EU), and Chinese growth rates rebounded in 2021, but are settling back toward their long-term growth trends, and their respective authorities are starting to unwind accommodating fiscal and monetary policy, especially considering rising inflation risks. This has heightened uncertainty about the impact of such policy tightening on the global recovery, which is already grappling with ongoing COVID-19 flare-ups and varying degrees of access and capacity to vaccination across countries, continuing supply constraints, and narrowing policy space in many countries.

*Vietnam was also severely affected by the protracted COVID-19 April outbreak that derailed its economic recovery in the third quarter of 2021*

**The Government's "No-COVID-19" approach was overwhelmed by the April 2021 outbreak that in turn led to lengthy shutdowns and steep economic costs.** Vietnam is no longer ahead of the curve compared to its neighbors in dealing with the impact of COVID-19 on its economy, as it was in 2020. In a year of economic rebound in most comparator countries, Vietnam grappled with lengthy shutdowns of major economic centers of the country—Ho Chi Minh City and Hanoi and surrounding areas—which led to its GDP contracting over 6 percent in the third quarter. Consequently, Vietnam's GDP is estimated to have increased by 2.58 percent in 2021, about 4.2 percentage points lower than the World Bank's projection for 2021 made in December 2020.

<sup>1</sup> World Bank GEP, January 2022.

**On the other hand, while Vietnam was not well prepared, with low testing and vaccination rates, for the April COVID-19 outbreak, the authorities reacted quickly to launch a national vaccination effort.** Between early July and mid-December 2021, over 75 percent of the population had received one jab and over 55 percent were fully vaccinated. This vaccination effort allowed the government to switch from a “No-COVID-19” policy, with strict lockdowns and serious economic pain to save lives, to a “Living with COVID-19” policy, where the economy could be reopened while health precautions continue.

*The April outbreak caused significant pains for workers, households, and businesses.*

**The April 2021 Covid-19 outbreak exacerbated the conditions on the labor market.** Vietnam’s labor market had not fully recovered from the onset of the COVID-19 crisis when the April 2021 outbreak started. The Q3-2021 lockdowns affected about 28.2 million workers, including a loss of 2.5 million in jobs and an increase in the unemployment rate to a record high 3.7 percent. An average worker earned 12.6 percent less in Q3-2021 than they did a year ago in real terms. Informal workers, household businesses, and women were especially vulnerable to the effects of the shock. At the sectoral level, services sector workers were hit hardest given the restrictions on social distancing. In the manufacturing sector, job losses, furloughing workers, or reducing working hours or salaries, while helpful to keep firms afloat and to ensure future employment, affected workers’ income. At the regional level, the Southeast suffered the largest share of job losses (52 percent) and experienced two waves of migrant workers leaving the area and their jobs. One group of migrants left before the lockdown, creating a labor shortage, while a second group left right after re-opening, which exacerbated the labor shortage. According to GSO, as of December 15, 2021, a total of 2.2 million

people returned to their hometown, and about half of them departed from Ho Chi Minh City and other Southern provinces. As the lockdown was lifted and the economy re-opened, labor market conditions improved in Q4-2021, but have a long way to fully recover.

**Firms were also severely affected by the Q3 lockdown, but business confidence has started to recover in last months of the year.** The World Bank Business Pulse Survey conducted during September to November 2021 finds that firm closures in Ho Chi Minh City—the epicenter of the crisis—were especially high (35 percent), and of those that remained open, 57 percent reduced hours. Overall sales fell by 39 percent during September–November 2021 compared to the same period in 2019. Cashflow, however, deteriorated only slightly thanks to support policies and firms’ more cautious management. In fact, 57 percent of firms report having received some support from the government compared to 19 percent in June 2020 and 36 percent in January 2021.

*The external position has remained strong, but the current account surplus has deteriorated sharply*

**The country’s international reserves rose by US\$12.3 billion since December 2020, reaching US\$107.7 billion (equivalent to 3.7 months of imports) in total by the end of September 2021.** The current account shrunk from a surplus of 4.6 percent of GDP in 2020 to an estimated deficit of one percent of GDP in 2021 mostly because merchandise imports grew faster than merchandise exports (26.2 percent (y/y)<sup>2</sup> compared to 18.8 percent (y/y)) while service exports continued to be severely affected by the international travel restrictions. The steep current account deterioration is expected to be offset by a large surplus in the financial account thanks to resilient, albeit slightly lower FDI and large short-term capital inflows.

2 All growth rates are year over year unless indicated otherwise.

***Rapid monetary and credit expansion has ensured ample liquidity, while inflation has remained subdued***

**The State Bank of Vietnam (SBV) has continued its accommodative monetary policy in 2021 to support businesses during this persistent crisis.** Credit growth was consistently higher than economic growth rates, ensuring ample liquidity during the crisis. Despite rapid monetary growth and rising commodity prices, the Consumer Price Index (CPI) was subdued (1.84 percent), remaining well below the 4.0 percent target policy rate due to stable food prices and weak domestic demand.

***But the banking sector warrants close monitoring given rising NPLs***

**The forbearance measures provided as part of the SBV support package to stabilize firms can delay the recognition of nonperforming loans (NPLs), and the impacts of the April COVID-19 outbreak have not been fully reflected.** The preliminary NPL ratio for Q2-2021 is 3.66 percent but the SBV estimates that the adjusted NPL ratio would have been 7.21 percent if potential NPLs from restructured loans were included. Thin capital buffers and varied provisioning coverage ratios among banks mean that some banks may not be able to sustain significantly higher NPLs.

***And fiscal policy was contractionary most of the year, despite the availability of substantial fiscal space***

**The impact of the economic shock was compounded by lack of effective fiscal support for most of the year.** As of November 2021 the budget had an estimated surplus of VND 120.3 trillion (about US\$5.2 billion).<sup>3</sup> There were several reasons for this outcome. Despite the crisis, revenues collected as of November 2021 surpassed planned collection. On the other hand, total expenditures were well

below 2020 performance. The implementation of public investment started slowly in the first half of the year – as it was the first year of the five-year-plan cycle - and there were major delays in the third quarter due to lockdowns. Current expenditures were affected by public finance regulations that did not allow flexibility to move funds to where they were most needed in an exceptional crisis year.

**Additionally, the government's response to the Q3 COVID-19 outbreak and subsequent crisis was relatively modest and piecemeal, despite availability of ample fiscal space.** The authorities announced several relatively small fiscal packages during 2021 to support businesses (in April, September and October), households and informal workers (in July), totaling 2.5 percent of GDP compared to 4.5 percent of GDP in 2020. Because of implementation challenges, only an estimated 1.8 percent of GDP of this overall package was used, largely composed of tax deferrals that expire by the end of the year. In essence, fiscal policy did not provide much support to those most in need or support for aggregate demand. Meanwhile, there was ample fiscal space for such actions given debt-to-GDP ratio for 2021 is estimated to reach about 57.3 percent, well below the new 68 percent debt-to-GDP ratio<sup>4</sup> (or 55 percent debt-to-revised GDP) ceiling mandated by the National Assembly.

**While budget record a surplus in the first 11 months of the year, year-end government fiscal account registered a deficit of 4.8 percent of GDP.**<sup>5</sup> Revenue collections was one percent higher in 2021 than in 2020, while the authorities tried to increase expenditures after the re-opening. For example, total expenditure increased by 9.4 percent (y/y) in November for the first time since April 2021 thanks to the acceleration of public investment disbursement (up over 150 percent). However, by the end of November 2021 disbursement of the capital budget remained about 36 percent lower

<sup>3</sup> Ministry of Finance, Vietnam.

<sup>4</sup> The official debt ceiling in 2021-2025 is denominated in the revised GDP. To make the thresholds in 2021-2025 comparable to those in the previous five-year period, we convert it to ratio denominated in the before-revision GDP, assuming that the revised GDP is 26 percent higher.

<sup>5</sup> Annual budget data in 2021 were reported by the Ministry of Finance of Vietnam on 22 December 2021 and sourced from GSO's socio-economic report Q4-2021 published on 29 December 2021.

than the target set by the Prime Minister and it appears unlikely that large volume of investments could be executed fully in 2021. Nevertheless, the Ministry of Finance (MoF) reported an estimated VND 570 trillion (US\$24.6 billion) in expenditures in December 2021, leading to a deficit of about VND 316 trillion (US\$13.6 billion) for the year. Since the investment budget is expected to have an underrun, the large expenditure registered in December would appear to be mainly associated with large carry-over expenditures from 2021 to 2022. It also includes some capital expenditures that are to be disbursed by the end of January 2022 as well as the implementation of investment projects carried over from previous years to 2021. These deficit estimate may be revised when the government releases its final account of the 2021 budget. The 2019 deficit was adjusted by about 3.5 percentage of GDP after final budget reviews. The debt-to-GDP ratio is estimated to increase from 55.3 percent in 2020 to about 57.6 percent in 2021 and debt remain sustainable<sup>6</sup>.

***Looking ahead Vietnam's GDP should rebound from 2.58 percent in 2021 to 5.5 percent in 2022 but risks to the downside are high and warrant proactive response by the authorities***

**The economy is projected to grow by about 5.5 percent in 2022 and thereafter to stabilize at around 6.5 percent.** This projection assumes that the pandemic will be under control both domestically and internationally. Under these conditions and the easing of mobility and health restrictions, the services sector is expected to partially recover as consumers' and investors' confidence firms up during 2022. A measured restart of foreign tourism is also expected from mid-2022 onward, helping support the gradual recovery of the tourism sector. Manufacturing exports will benefit from a steady demand from the U.S., EU, and Chinese economies, as they continue to grow, albeit at a slower pace. Fiscal policy should be more accommodating, at least in the first part of 2022 as the authorities are

considering the adoption of a new recovery package at the beginning of the year, but they should resume fiscal consolidation starting in 2023. Monetary policies adopted to support businesses during the crisis are expected to be unwound starting in mid-2022. Monetary policy is to resume its prudent approach to balancing between supporting economic growth and managing inflation, while closely monitoring the health of the financial sector. The current account is expected to register small surpluses in the medium term thanks to a strong export performance and resilient remittances. Given the strong dependence of Vietnamese exports on imported inputs, this surplus will be modest at about 1.5-2 percent of GDP in the medium term. Remittances are expected to contribute a steady US\$18 billion to US\$20 billion to the current account in the medium term.

**The short to medium-term prospects are subject to serious downside risk.** COVID flare-ups, including variants such as Omicron, could emerge before widespread vaccination is reached, forcing renewed social distancing measures, and slowing economic recovery in Vietnam and in its main export markets. In Vietnam, continuing a rapid pace of initial vaccinations, administering a booster dose to the population in 2022, and keeping the "five K good hygiene"<sup>7</sup> national practices will help diminish the risk of such new variants spreading among the population. Many countries also have less room to use fiscal and monetary policy to deal with this persistent crisis, adding uncertainty and downside risks to the global recovery momentum, which again could affect Vietnam. Finally, major countries that experienced an economic rebound in 2021 are expected to start unwinding supportive policies, including monetary policies that could affect the financial sector of many emerging economies, including Vietnam. These major economies will also experience a softening of growth in 2022 as their economies revert to longer-term economic patterns. The growth of Vietnam's major export markets, the United States and China, is projected

<sup>6</sup> This report uses non-revised GDP in its calculations.

<sup>7</sup> The health campaign launched by the Vietnamese authorities to keep people healthy and infection free in the wake of the COVID-19 pandemic. 5 K translates into "Masks, Disinfection, Distance, Distractions (do not congregate) and Medical Declaration".

to slow to 3.8 percent and 5.1 percent in 2022, respectively. This heightens uncertainty and downside risks to the global recovery momentum, which in turn could affect Vietnam's exports and economic recovery.

*In addition to the uncertainty associated to the path of the pandemic, the authorities should take action to minimize the effects of the fiscal, social, and financial sector risks*

**Step up fiscal support.** Unlike most countries, Vietnam has substantial fiscal space but has not used it sufficiently to support the economy. However, not stepping up fiscal support in times of deep crisis causes serious economic hardship for many households and informal workers, and is damaging to the economy, potentially reversing some of the poverty reduction gains Vietnam has achieved in the past two decades. In the short run, it deprives the economy of much-needed expenditures to support domestic consumption and investments. The government is considering a substantive package of support for 2022-2023, but the details were not fully set as of early January 2022. As this package is being finalized and adopted, the government could ensure support for social programs such as safety nets, and support health and education expenditures as these two sectors have been penalized by the pandemic. In the meantime, it can use some of its cash reserves to finance short-term social programs. Now that many domestic mobility restrictions have been eased, the implementation of public investment projects could be accelerated both at the central and local levels. Furthermore, as faster expenditures can take time to materialize due to several administrative and institutional bottlenecks, the government should consider using revenue instruments such as a temporary reduction in value-added tax to stimulate private demand. It can also adopt a small financial transactions tax to add to its funds for social protection expenditures. In the long run, increasing public investment rates, especially in infrastructure and human capital, would support the growth potential of the country as it prepares to

implement the 2021–2030 SEDS and transition to a more sustainable, digital, and green growth path.

**Address social effects of the pandemic.** The April outbreak has left an indelible impact on the labor market and household incomes, compounding the lingering effects of the first year of the crisis. Lower household income would affect consumption and investment decisions, and by extension, economic recovery. Short-term current expenditures in health and education may help alleviate some of the effects of the crisis on the population while helping boost the economy. For example, providing tablets to or ensuring internet accessibility for children would support learning outcomes by virtual learning. Enhancing health checks and nutritional follow-ups would help ensure children avoid malnutrition and stunting, which continues to be an issue in Vietnam. The authorities should also launch a full review of the country's social protection programs to improve their targeting, scope, and efficiency. In the medium term, such a review and developing an electronic database to unify registry of potential beneficiaries and provision of services would be an important step to reform the system and ensure future victims of natural or economic shocks receive adequate support.

**Address the financial sector reform agenda.** Policymakers should consider a few areas of action.<sup>8</sup> Policymakers should adopt a gradual exit strategy, unwinding the relief measures as soon as circumstances permit to ensure sound financial and risk management and discipline. Policymakers would need to ensure that banks are ready to implement effective and early workouts as part of NPL resolution. These actions include establishing or strengthening a framework for loan restructuring in general, legal recovery through collateral enforcement, write-offs, and sales or debt trading. An effective insolvency regime is important in minimizing losses in NPL resolution. Policymakers should strengthen prudential supervision to enable early identification of problem banks and to strengthen the resolution framework to deal with them, including but not limited to bank restructuring,

8 For further elaboration, see World Bank Group (2021).

asset separation, mergers, acquisitions, bail-ins, recapitalizations, and liquidations. The authorities should push for adoption of the Basle II capital rules for all operating banks.

## Chapter 2: NO TIME TO WASTE – The challenges and opportunities of cleaner trade for Vietnam

**Vietnam has benefited enormously from adopting an export-oriented growth model in the past 20 years, but this model has also left an important environmental footprint.** Joining the World Trade Organization (WTO) in 2007 and 13 free-trade and regional trade agreements, the country succeeded in enhancing its competitiveness through increased access to markets and lower tariffs.<sup>9</sup> This trade flow has grown exponentially; in 2020, the value of goods and services exported by Vietnam was 106.6 percent of its GDP. But Vietnam’s trade sector has a substantial carbon footprint and resource intensity that contribute to increasing environmental damage and depletion of the country’s natural wealth. Climate change also affects Vietnam’s competitiveness and trade flows by raising production and transport costs.

**Greening goods trade is a priority for several reasons.** First, it can help reduce the carbon or environmental footprint of trade industries. In turn, these reductions contribute to the implementation of a green, resilient, and inclusive development approach and help Vietnam reach its national mitigation objectives. Second, greening goods trade can spur existing industries to retool to green technology and remain competitive in the future low-carbon world. Third, it can offer new opportunities for trading in environmental goods and services. Finally, greening trade is expected to be a potential driver of new jobs as existing industries retool and businesses take advantage of opportunities in new environmental goods and services.

This section responds to a set of questions to help authorities understand how cleaner goods trade can help Vietnam’s future economic growth:

- How vulnerable is Vietnam’s goods exports sector to climate change?** Climate change is expected to affect two of Vietnam’s most important export sectors—industry and agriculture—as well as trade-related transport and logistics infrastructure. The lion’s share of industrial and agricultural production and exports are in coastal lowlands and deltas that are vulnerable to climate change. About one-third of industrial parks are today at risks of flooding and tropical storms every year. Vietnam’s agriculture sector accounts for 13.2 percent of exports, and its production and exports are especially vulnerable to climate change, especially rising temperatures, and extreme weather events. For example, empirical studies show that rice production could suffer yield losses of between 5 and 23 percent by 2040, especially in the Mekong Delta, increasing risks for food insecurity.<sup>10</sup> In addition, if the sea level rises 100 centimeters (3.28 feet), about 4 percent of the national rail system, more than 9 percent of national highways, and about 12 percent of provincial roads are estimated to be affected.
- How much does the goods trade sector contribute to carbon emissions in Vietnam?** The trade sector is a major source of carbon emissions in the economy. On the production side, agriculture – especially rice and livestock are - a major source of emissions. In manufacturing, while Vietnam ranks relatively high in emission intensity in manufacturing, analysis shows that the firm-level direct greenhouse gas (GHG) emissions are relatively small. Rather, the emissions are associated with indirect GHG emissions that come from the purchase of electricity, steam, heating, or cooling, so energy production needs to be

<sup>9</sup> Source: Center for WTO and International Trade, Vietnam Chamber of Commerce and Industry, Hanoi. Two more FTAs, the Regional Comprehensive Economic Partnership (RCEP) and United Kingdom – Vietnam Free Trade Agreement (UKVNFTA) were signed in late 2020 but are not in effect yet. Another two FTAs, with the European Free Trade Association (EFTA) and with Israel, are under negotiation (<https://wtocenter.vn/thong-ke/13814-vietnams-ftas-summary-as-of-april-2019>).

<sup>10</sup> Jiang et al. 2018 ; Li, Wang, and Chun 2017.

more environmentally friendly. Still, the sheer value of manufacturing exports drives the overall amount emissions. Finally, freight and passenger transport contribute substantively to overall emissions.

- ***How would plans by Vietnam and other countries to mitigate environmental damage affect the country's goods trade?*** An analysis using an economic model finds that introducing carbon tax in Vietnam leads to a significant reduction in emissions, without penalizing the country's competitiveness. Most export sectors will not be significantly affected as they are not direct carbon dioxide emitters. Vietnam's export competitiveness, however, could be affected by the mitigation policies of its major trading partners. Consumers in Vietnam's major export markets – such as the US or the EU - are increasingly demanding more environmentally friendly goods and cleaner production processes. Also, many FDI firms are part of values chains where the central corporations have committed to greener practices as part of their corporate social and environmental commitments. Such commitments will trickle back to producers along the value chains.

**In Vietnam, this will be reflected in the inflow or outflow of FDI that are mostly housed in the Industrial Parks dotting the country.** These industrial parks – account for approximately 30 percent of the total industrial output, over 70 percent of the country's exports, and about 25 percent of its total annual CO<sub>2</sub> emissions. They would most likely need to transition to cleaner production processes or risk losing investment to competitor countries who have made this transition.

**Additionally, many countries are contemplating setting higher tariffs on polluting goods and services to reduce emissions by raising the price of carbon.** This could affect the competitiveness of Vietnam's exports to EU, but also open opportunities for cleaner exports. For instance, the EU is one of Vietnam's major export destinations, and an analysis of the

impact of the 2019 EU Green Deal, which includes a plan to implement a carbon border tax adjustment (CBAM), shows that it will have limited negative effects on Vietnam for two main reasons. First, the EU CBAM coverage is currently limited; as it expands and as other countries implement their own CBAM schemes, their macro-economic impacts will likely become more significant. Second, currently only 4 percent of Vietnam's exports to the EU-27 are products with high emission intensity. On the other hand, the export of non-carbon-intensive products—such as other light manufacturing, computers and electronics, and some transport sectors—to the EU could increase, representing new opportunities to integrate more deeply into global value chains.

- ***What are the opportunities for producing and exporting new environmental products?*** Vietnam's trade in renewable energy products has already shown promise for continued growth. Total environmental goods exports have increased from US\$18.1 million in 2002 to US\$6.5 billion in 2020, the third-highest export in South East Asia of such products behind Singapore and Malaysia. Exports of renewable energy products increased from US\$3.5 million in 2002 to US\$5.1 billion in 2020, accounting for more than 50 percent of total environmental goods exports on average between 2002 and 2020.

**In addition, as discussed, FTAs can provide new opportunities for green trade.** For instance, the EU Green Deal Carbon Border Adjustment Mechanism (CBAM) creates opportunities in low carbon-intensive products such as computers and electronic and optical equipment, which can be further explored. In fact, when the CBAM is implemented, production of computers and electronics is projected to increase by 0.6 percent relative to the EU Green Deal, the equivalent of US\$800 million.

**Greening traditional exports should also be considered, including in three important**

**sectors that can achieve substantive energy savings:** (i) the textile, apparel, and footwear sector; (ii) the food processing and agribusiness sector, especially as the food and beverage sector's production value is estimated at US\$33.6 billion, contributes toward 8 percent of the country's annual average GDP, but is highly energy intensive; and (iii) the cement, construction materials, and chemicals sector, which can contribute toward saving 30 percent of used power from the electricity grid.

- ***But how can policies help promote the adoption of environmentally friendly technologies, production, and exports?*** Beyond the current success story of solar panel exports, the authorities could help build the foundations of producing and exporting more environmental products.
- ✓ **Continue strengthening the standards and quality infrastructure and the capacity to ensure improved quality of products and services, including for environmental services.** Vietnam is building local and export production capacity in environmental products through a series of domestic reforms, including through its new environmental law. Pursuing mutual recognition of qualifications of environmental engineers can help streamline visa and work permit procedures for environmental specialists.
- ✓ **Seize FTA opportunities to promote sustainable production practices in all its products.** Agreements such as the EU-Vietnam FTA and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)

include environmental commitments by all members in their trading practice for all their exports. Vietnam can use this opportunity to develop and establish a Vietnam green brand that will set it apart from other exporters and build brand loyalty.

- ✓ **Seize FTA opportunities to promote environmental products, including development of renewable energy.** Vietnam is competitive in environmental products in North America and East Asia, particularly in renewable energy products. FTA can enhance the opportunities for inward FDI into Vietnam and/or transfer of new technologies to Vietnamese firms, and further integration into the global and regional value chains.
- ✓ **Use trade policy to facilitate mitigation and adaptation.** For example, reducing tariffs on technological goods and liberalizing regulatory policies can facilitate access to agricultural digital technologies and services from advanced economies, and foster innovations to increase yields while reducing the potential for adverse land-use change.
- ✓ **Consider reviewing and streamlining non-tariff measures (NTMs).** The policy regulatory framework in Vietnam includes extensive non-tariff measures (NTMs) that may constrain the trade of goods, including environmental goods. Because these NTMs are applied on all products, systematically monitor them with a view to streamlining and reducing compliance costs. This would help boost trade flows and encourage entry of more firms into the sector.





*Photo credit: Lao Dong newspaper*



# CHAPTER 1

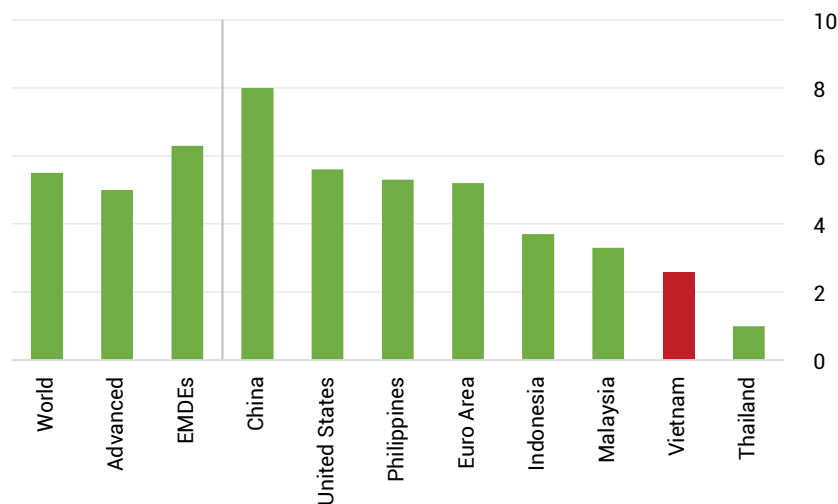
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## Recent Economic Developments and Prospects

## I. Introduction

**Two years into the COVID-19 crisis, the global recovery is continuing, but its momentum has been hamstrung by the resurgence of infections and heightened uncertainty about the path of the pandemic as new variants—such as the new Omicron variant—emerge.** The global economy is estimated to have grown 5.5 percent in 2021 and is projected to grow 4.2 percent in 2022 (figure 1.1). Most countries have entered a new phase of the crisis, learning to live with and adapt to the crisis. Country-specific recovery is strongly driven by vaccination rates and the ability of governments to support their economies through this persistent crisis, especially as many countries are experiencing infection resurgences. Countries that have vaccinated a larger percentage of their population in 2021 registered a stronger rebound in 2021 before new surges of COVID-19 infection and challenges in restarting economies weakened their growth momentum. This group includes most advanced economies and many in the emerging market and developing economy groups. Among these groups, Vietnam’s three main trading partners—the United States, the Euro Area, and China—are estimated to have grown by 5.6 percent, 5.2 percent, and 8 percent, respectively, in 2021. Other countries that started vaccinations later in 2021 and that have been grappling with securing sufficient vaccines, a resurgence of infections, and challenges to their ability to support their economies, are experiencing weaker than anticipated economic recovery. This group includes lower-income economies.

**Figure 1.1. Economic growth in 2021**  
Percent



Sources: GSO and World Bank Group 2022.

Note: EMDEs = emerging markets and developing economies.

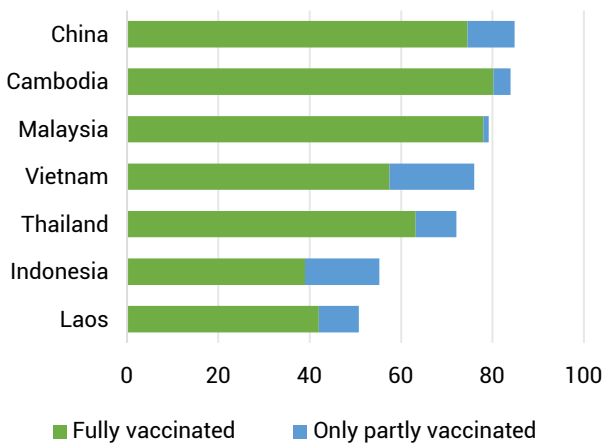
**There are major downside risks as the crisis persists into a third year.** The spread of new variants—such as the highly contagious Omicron variant—could lead to further distancing measures, thus inflicting further damage to national economies and international trade. Vietnam as a very open economy could be seriously impacted by such a development. Many countries also have less room to use fiscal and monetary policies to further support their economies through a third year of crisis, especially if new variants spread, causing further lockdowns, business closures, and further loss of income by workers and households. Finally,

major countries that experienced an economic rebound in 2021 are expected to start unwinding supportive policies, including monetary policies that could affect the financial sector of many emerging economies, including Vietnam. These major economies will also experience a softening of growth in 2022 as their economies revert to longer-term economic patterns. The growth of Vietnam’s major export markets, the United States and China, is projected to slow in 2022 to 3.8 percent and 5.1 percent, respectively. This heightens uncertainty and downside risks to the global recovery momentum, which in turn could affect Vietnam’s exports and economic recovery.

### **Vietnam was severely affected by this turbulent and uncertain year but stands apart in three distinct ways.**

**While Vietnam was not well prepared for the April 2021 COVID-19 outbreak, the authorities launched a late but relatively successful national vaccination effort.** Unlike most countries, Vietnam successfully managed a “no-COVID-19” policy in the first year of the crisis but was not fully prepared for the rapidly expanding April outbreak. However, while it started later than most countries, Vietnam reacted quickly in the summer of 2021 to try to secure a supply of vaccine and started vaccinations in early July. While supply constraints have at times affected the pace of the vaccination, Vietnam rolled out a massive campaign to vaccinate its citizens. By late December, and within about five months of the vaccination campaign launch, over 75 percent of the population had received one jab and over 55 percent had been fully vaccinated. This is a remarkable achievement, even if there are some regional variations and Vietnam still has some way to go compared to its neighbors (figure 1.2). The remarkable speed and coverage of the vaccination effort also allowed the government to switch from a “No-COVID-19” policy, which led to strict lockdowns and serious economic pain to save lives, to a “Living with COVID-19” policy under which the economy could be reopened while health precautions continue. This switch has led to increased infection rates, which averaged around 13,000 per day in mid-December and total infections stood at over 1.3 million, while the death toll surpassed 24,000. However, rapid vaccination has helped lower the case fatality rate—that is, the ratio between confirmed deaths and confirmed cases—from 2.5 in September to 1.9 in late December (figure 1.3).

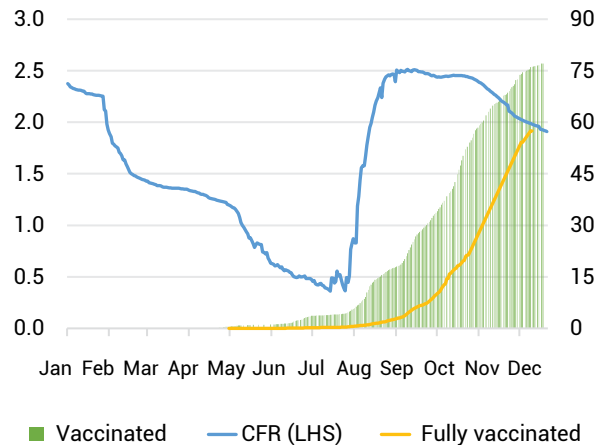
**Figure 1.2. Share of people vaccinated against COVID-19, Vietnam compared to selected countries**  
Percent



Source: Our World in Data

Note: Data as of December 21, 2021 or latest available.

**Figure 1.3. COVID-19 vaccination and case fatality rates**  
Percent (cumulative)



Source: Our World in Data and World Bank staff calculations

Note: As of December 21, 2021, or latest available. As data on people fully vaccinated between October 23 and December 2 were discontinued, the line was smoothed by using two-day moving average. CFR = case fatality rate; LHS = left-hand scale.

**The authorities’ economic response to the crisis was relatively small despite Vietnam having ample fiscal space.** In fact, the fiscal stance was contractionary during most of 2021 despite the April 2021 outbreak and its resulting severe economic crisis. As of end November 2021, the estimated budget surplus was VND 120.3 trillion (about US\$5.2 billion)<sup>11</sup>. The overall 2021 fiscal support package announced by the authorities was about 2.5 percent of GDP, 55 percent of the 2020 fiscal package. The relatively small packages to support businesses (in April and September) and households and informal workers (in July) were not fully used due to implementation challenges. By late 2021, about 72 percent of the overall package was used by beneficiaries, with the use of tax deferrals constituting the lion’s share. The implementation of public investment also experienced a slow start in the first half of the year and major delays in the third quarter due to lockdowns. In essence, the fiscal policy did not provide much targeted support to those most in need or support for aggregate demand. On the one hand, bearing the burden of the crisis now without further expenditure does not burden future generations with debt accumulated to deal with the crisis. On the other hand, not supporting the economy now causes serious economic hardship for many households and informal workers, potentially reversing some of the poverty reduction gains Vietnam has achieved in the past two decades. In addition, low investment, especially in infrastructure and human capital, could jeopardize the economy’s potential future growth.

**This policy hesitancy contributed to the fact that, unlike in 2020, Vietnam is no longer ahead of the curve compared to its neighbors in dealing with the impact of COVID-19 on its economy.** In a year of economic rebound in most comparator countries, Vietnam grappled with a lengthy shutdown of major economic centers of the country—Ho Chi Minh City and Hanoi—that led to its GDP contracting over 6 percent in the third quarter and that derailed a strong first semester economic recovery. The GDP is now expected

11 Ministry of Finance, Vietnam.

to grow an estimated 2.58 percent, about 4.2 percentage points lower than our projection for 2021 in December 2020. By comparison, Indonesia, the Philippines, and Malaysia are expected to grow faster than Vietnam in 2021 (figure 1.1). The shutdowns also led to large employment losses and increased hardship for households.

**Chapter 1 of this issue of Taking Stock report reviews the recent developments in the Vietnamese economy and assesses its short- to medium-term prospects.** Section II of this chapter examines the country's growth performance, its external balance, and monetary and fiscal policy responses during 2021. Section III discusses the outlook for the Vietnamese economy in the next two to three years, highlighting domestic and external risks. Section IV discusses the role cleaner trade (green trade) could play in helping Vietnam transform its development model and achieve its ambition to become a high-income economy by 2045.

## II. Recent economic developments

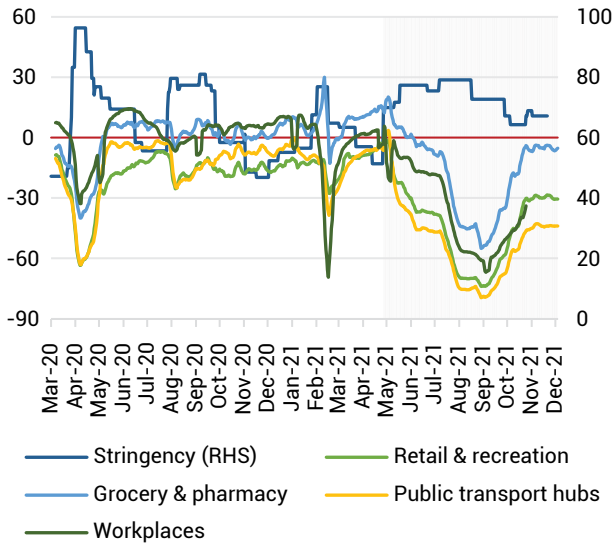
### Robust economic growth in the first semester of 2021, but the COVID-19 April outbreak derailed recovery and led to extensive human and economic costs

**The April 2021 outbreak and its spread in many southern provinces and major economic centers—such as Ho Chi Minh City and Hanoi—led to progressively stringent health and mobility measures introduced during May to August 2021.** All mobility indicators<sup>12</sup> deteriorated rapidly since the beginning of May (figure 1.4). By the end of August, mobility had fallen by 60 to 75 percent, surpassing the slowdown recorded in April 2020 when the country underwent its first national lockdown. As the infection surge started to ease in mid-September 2021 (figure 1.5) and vaccinations rose sharply, the authorities announced a switch in their COVID-19 policy from No COVID-19 to Living with COVID-19. Many provinces—including Hanoi and Ho Chi Minh City—eased mobility restrictions in early October. Economic activity resumed but has been affected by difficulties in resuming full production due to input and labor shortages in the southern provinces (figure 1.6).

12 “[M]obility data” describes information generated by activity, events, or transactions using digitally-enabled mobility devices or services...such as smartphones, shared micromobility vehicles (shared bikes, e-bikes, scooters etc), on-board vehicle computers, or app-based navigation systems (e.g., Waze, GoogleMaps etc)” (<https://www.uitp.org/news/mobility-data-opening-doors-to-possibility-and-privacy-risk/>).

**Figure 1.4. Mobility trends**

**% change compared to baseline, Jan 3–Feb 6, 2020  
(7-day moving average)**

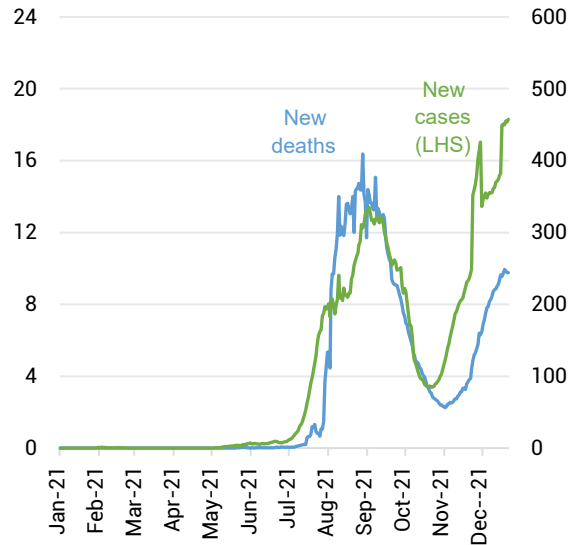


Source: Google COVID-19 community mobility Reports. Google COVID-19 community mobility Reports and Our World in Data.

Note: As of December 21, 2021. Data on mobility in workplaces were discontinued from October 20, 2021 as the data do not meet quality and privacy thresholds for every day in the chart

**Figure 1.5. Daily new cases and new deaths**

**New cases in thousands  
(7-day moving average)**

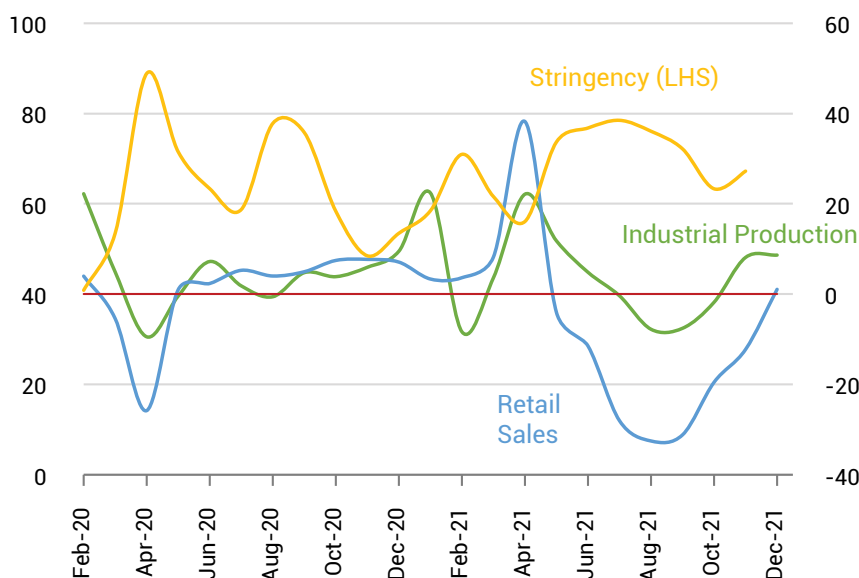


Source: Our world in data, <https://ourworldindata.org/>

Note: As of December 21, 2021; LHS = left-hand scale.

**Vietnam’s economy is estimated to have grown by an 2.58 percent in 2021 because of the April COVID-19 outbreak and subsequent Q3 mobility measures.** This growth rate is much weaker than the 6.8 percent GDP growth rate we had projected in December 2020. The first semester of 2021 held the promise of a full rebound back to the pre-COVID era, with a strong GDP growth of 5.6 percent. However, the lockdowns led a -6.2 percent Q3 GDP contraction—one of the most severe contractions in the past four decades—as both the manufacturing and services sectors were hit hard. Retail sales started a multi-month contraction in May and fell by 31 percent in September. Industrial production hit a low of -7.6 percent in September. While the economy reopened in October, it is grappling with labor shortages. Both retail sales and industrial production started an immediate recovery but will need time to reach pre-lockdown activity levels. Industrial production grew 5.5 percent (month over month [m/m]) in November and 8.7 percent (y/y) in December. Retail sales grew 6.2 percent (m/m) in November and returned to positive territory in December (1.1 percent (y/y)) but clearly has more ground to cover to return to pre-pandemic levels (figure 1.6). Despite the challenges to the economy, Q4 GDP is estimated to have grown by about a robust 5.22 percent. The services sector contributed 2.3 percentage points to this quarterly growth, surpassing manufacturing (2.1 percentage points). The exceptional growth of the health care services and social relief category (over 90 percent in Q4) constituted about half of the services sector’s contribution (1.2 percentage point) to the quarterly GDP growth.

Figure 1.6. Economic activity and restrictive measures



Sources: GSO; Haver Analytics; Our World in Data; and World Bank staff calculations.

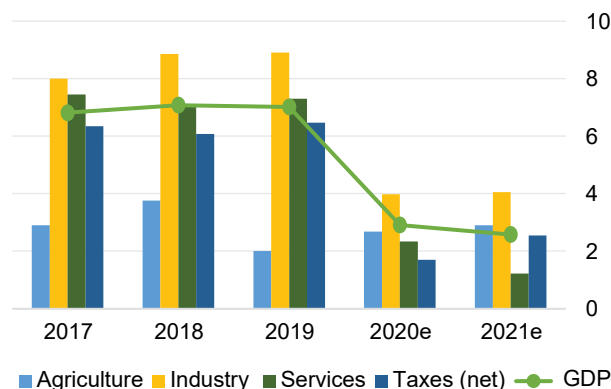
Note: Industrial Production and retail sales = % change (y/y); Stringency = Government Stringency Index. LHS = left-hand scale.

**Sectoral contributions to growth reflected the differentiated impact of the COVID-19 crisis on the economy.**

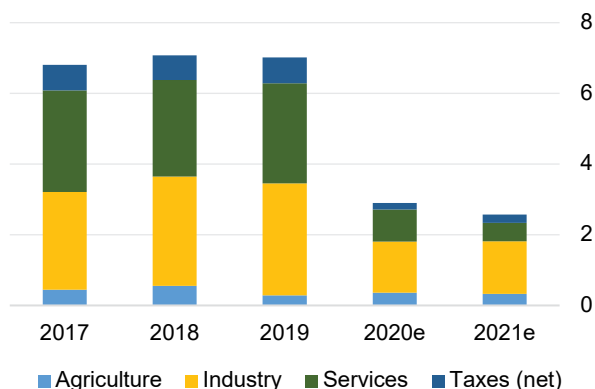
The agricultural sector has remained the least affected by the crisis, growing 2.9 percent in 2020 and 2021 although it contributed marginally to overall growth. Industry and construction grew by 4.0 percent in 2020—less than half 2019’s growth rate—and performed about the same in 2021 (figure 1.7). It contributed about 1.5 percentage points to overall growth in 2021 (figure 1.8). Within the industrial sector, in 2021, manufacture of basic metals was the strongest performer (up 22.1 percent), followed by motor vehicles (up 10.2 percent), and computer, electronic and optical products (up 9.6 percent), while apparel and footwear had weaker performances (up 7.6 percent and 5.2 percent, respectively) as they were especially affected by the Q3 lockdown and the subsequent difficulties in value chain disruptions and labor shortages.

**The services sector has been hit hard by the crisis but improved with the reopening.** Services sector, which had not recovered fully since the April 2020 national shutdown, contracted by 0.7 percent in the first nine months of 2021, mostly due to the steep contraction related to the Q3 shutdowns, and had a negative contribution to growth up to September 2021. The lackluster performance of the services sector is multifaceted. It was already hamstrung starting in April 2020 with the closing of borders, which shut down the foreign tourism sector, and the slow recovery of domestic demand since the April national lockdown. In addition, retail sales and services have been very sensitive to stringency measures (figure 1.6), with services sales—such as accommodations, personal services, and the like—being even more vulnerable to the shock in the first nine months of 2021. Services sector performance improved with the reopening and registered 1.2 percent growth for the year, contributing 0.5 percentage point to overall GDP growth (figure 1.7 and figure 1.8).

**Figure 1.7. GDP and sector growth**  
Percent



**Figure 1.8. Sectoral contribution to growth**  
Percentage point

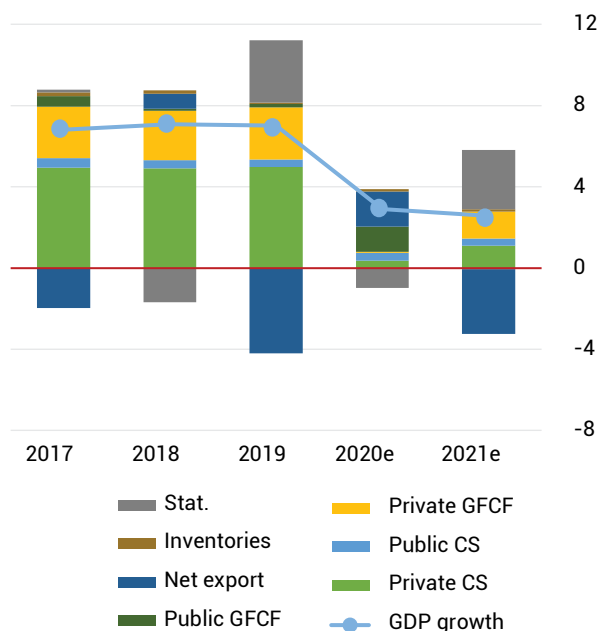


Sources: GSO and World Bank staff calculations.

Note: Data in 2021 are calculated from reevaluated GDP.

**On the demand side, the weak GDP growth in 2021 was due to weak private demand, limited contribution by the public sector, and a lower contribution of net exports compared to 2020.** Overall, private demand contributed about 2.4 percentage points to growth in 2021, much better than the 0.5 percentage point contribution in 2020, but far less than the typical 7.5 percentage points it contributed during 2017–2019 (figure 1.9). In the first half of 2021, recovering domestic private consumption and private investment contributed to GDP growth; while this was interrupted by the Q3 lockdowns, it started again in October as mobility restrictions eased. In fact, gross capital formation (investment + inventories) grew by 4 percent in 2021. Given the slow disbursement of public investment and the fall in foreign direct investment (FDI) disbursement, private domestic investment appears to have been the main driver of this gross capital formation. The government returned to a less accommodative fiscal policy at the beginning of 2021. Implementation of government recurrent expenditures and investment lagged 2020 implementation for most of the year. In fact, over the first 11 months of the year, the budget registered a fiscal surplus of VND 120.3 trillion (US\$5.2 billion), as total expenditures contracted by 7.4 percent while revenues increased by 10.2 percent. The result is that – despite the sharp rise in expenditures reported in December 2021, overall contribution of the public expenditures to growth was small (0.3 percentage point) in 2021. The contribution of net exports to growth in 2021 diminished compared to 2020 as the rapid increase in imports outpaced export growth (see discussion below).

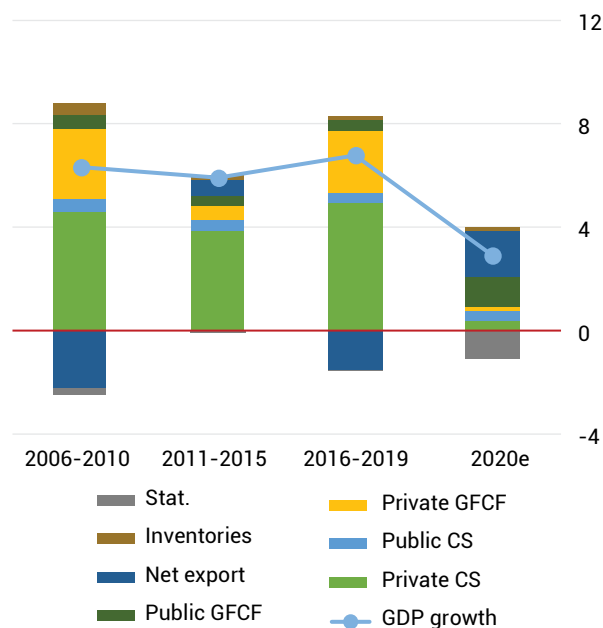
**Figure 1.9. Contribution to GDP growth by expenditure, 2017–2021**  
Percentage point



Sources: GSO and World Bank staff calculations.

Note: CS = consumption; GFCF = gross fixed capital formation; Stat. = statistical discrepancy.

**Figure 1.10. Contribution to GDP growth by expenditure, 2006–2020**  
Percentage point



Sources: GSO and World Bank staff calculations.

Note: CS = consumption; GFCF = gross fixed capital formation; Stat. = statistical discrepancy.

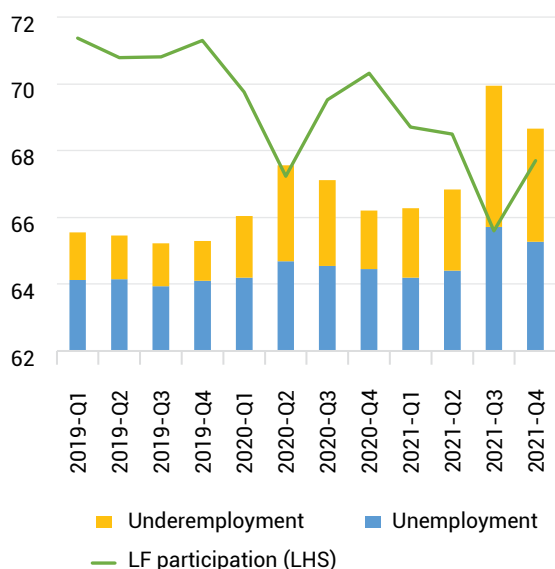
## The April outbreak led to a deterioration in the labor market and loss of income for households

**The April 2021 outbreak exacerbated general labor market conditions.** Vietnam’s labor market had not fully recovered from the onset of the COVID-19 crisis in April 2020, when the April 2021 outbreak started. Despite a 2.9 percent GDP growth in 2020 and a 4.65 percent quarterly growth in Q1-2021, Vietnam had fewer jobs, a lower labor force participation rate, and higher unemployment and underemployment rates in Q1-2021 than in Q1-2019 (figure 1.11). The Q3-2021 lockdowns affected about 28.2 million workers.<sup>13</sup> About 2.5 million jobs were lost, causing unemployment to rise.<sup>14</sup> The labor force participation rate dropped to 65.6 percent, the lowest level observed since Q1-2020, and the unemployment rate increased to a record high of 3.7 percent (figure 1.11). The underemployment rate also surged to 4.2 percent in Q3-2021. As the lockdown was gradually lifted and economic activities resumed progressively, labor market conditions improved in Q4-2021, but these three key indicators have yet to recover to their pre-outbreak levels.

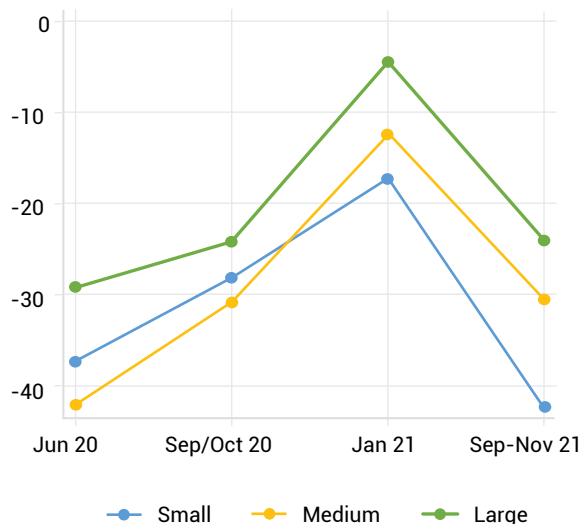
<sup>13</sup> Vietnam’s General Statistics Office, labor market reports, 2021.

<sup>14</sup> World Bank COVID-19 Business Pulse Surveys undertaken during September to November 2021 found that net employment declined by 17 percent in large firms, 20 percent in small firms, and 27 percent in medium-sized firms.

**Figure 1.11. Labor market  
Percent (NSA)**



**Figure 1.12. Firms' change in sales relative to 2019  
Percent**



Sources: GSO and World Bank staff calculations.

Source: World Bank 2021a.

Note: LF = labor force; LHS = left-hand scale; NSA = not seasonally adjusted.

**The crisis had a differentiated impact on employment across regions, sectors, and type of workers.**

**Workers in different regions experienced the crisis differently.** Two factors affected the labor market in various regions: (i) the strength of the pandemic and the ability of the regional authorities to manage its spread; (ii) the composition of economic activities in different regions. For instance, regions that were more agricultural and less affected by the Delta spread had no serious labor market issues to report. On the other hand, the Southeast (including Ho Chi Minh City and surrounding industrial provinces) was the epicenter of the crisis. It also houses an important portion of facilities for manufacturing exports. Therefore, the Southeast made up the largest share of job losses (52 percent), followed by the Mekong Delta (28 percent) and the North and South-Central Coast (14 percent), while Red River Delta and other regions remained relatively intact. In the wake of the April 2021 outbreak, many workers who had migrated to Ho Chi Minh City and other Southeast industrial powerhouses returned to their hometown in two waves. One group of migrant workers returned home at the beginning of the lockdown – in early July- to mitigate risks of being infected and avoid strict isolation, creating a labor supply shortage. A second wave of migrant workers left the Southeast region right after the end of the lockdown in early October, exacerbating the issue. According to the GSO, as of December 15, 2021, a total of 2.2 million people had returned to their hometown, and about half of them departed from Ho Chi Minh City and other Southern provinces.

**At the sectoral level, the biggest loss was in the services sector, where employment fell by 11.7 percent, reflecting its sensitivity to social distancing.**

Employment in industry and construction also fell by 5.8 percent<sup>15</sup> as factories and construction sites, particularly in southern industrial hubs, either were shuttered to contain the outbreak or operated well below their production capacities under the three-on-site model, in which workers had to work, eat, and sleep in their factories. In contrast, employment in agriculture rose by 3.4 percent, a transitory reversal of its long-term declining trend. This increase is likely attributed to migrant workers who returned to their hometown and worked in agriculture after losing their jobs in

<sup>15</sup> The services, industry and construction contributed 6.4 percentage points to the decline in total employment.

the southern provinces. As the economy was recovering, employment rebounded in Q4-2021 (up 3.9 percent (quarter-over-quarter [q/q])) although it remained 3.5 percent lower than Q4-2020. Industry and construction witnessed the strongest recovery (up 7.6 percent (q/q)), followed by services (up 4.4 percent (q/q)). However, both have yet to reach the levels observed in Q4 2020.

**Different types of workers also experienced the crisis differently.** The lockdown in Q3-2021 appeared to impact both women and men, as their respective labor force participation, unemployment and underemployment rates moved almost in parallel with the aggregate indicators between Q2- and Q3-2021. However, their recovery path might be different since female workers may face more challenges when attempting to find jobs, as observed in the aftermath of the April 2020 national lockdown. The share of informal employment in total employment dropped by three percentage points, indicating that informal workers,<sup>16</sup> many of whom worked in the construction and service sectors, were hit harder by social distancing and mobility restrictions than formal workers.

**The impact of the Q3 shock on households and workers income was severe. In Q3-2021, there was an estimated US\$1.9 billion in aggregate household income lost, or 0.7 percent of GDP.**<sup>17</sup> About one-third of the loss could be attributed to the decline in employment, while the remaining two-thirds came from lower monthly wages and incomes. In fact, World Bank's COVID-19 Business Pulse Surveys undertaken during September to November 2021 found that 30 percent of businesses granted unpaid leaves of absence compared to only 3 percent in January 2021, which affected labor income.<sup>18</sup> An average worker earned 12.6 percent less in Q3-2021 than they did a year ago in real terms, suggesting economic hardship suffered by many households. This is a substantive setback to the income recovery which has been ongoing since Q3-2020. As restrictions have been eased and economic activity has resumed, household and worker incomes partly recovered in Q4-2021 but will take time to return to the levels observed in Q4-2020.

**Households and workers dealt with the economic and non-economic costs of the crisis.** According to a household survey conducted in early August 2021 by the United Nations Development Programme (UNDP),<sup>19</sup> to cope with income loss, affected households cut their expenditures, particularly for food and electricity, and borrowed from friends, although even borrowing became increasingly difficult as members of their network were also hit hard. Many households had to reduce either the amount of food served per meal or the number of meals per day. Also, two-thirds of households surveyed experienced mental health issues. Women were more likely to suffer mental health issues than men. Migrants living in small, overcrowded accommodations also disproportionately experienced these issues. The shock may have long-term consequences on the population's well-being as the country emerges from the crisis.

## The April outbreak has also left a strong negative mark on businesses

**Businesses were also seriously impacted by the outbreak and lockdowns.** A World Bank Business Pulse Survey conducted in September to November 2021 finds that firm closures were especially high in Ho Chi Minh City (HCMC) (35 percent), the epicenter of the outbreak, with the April 2021 outbreak compared to

<sup>16</sup> Excluding self-employed workers in agriculture.

<sup>17</sup> World Bank staff calculations. Aggregate household income loss is estimated by the difference between aggregate household income in Q3-2021 and in Q3-2020. The aggregate income in each quarter is estimated by multiplying total employment by average quarterly income, which is equal to the average monthly income multiplied by three. Data on employment and income are from the GSO.

<sup>18</sup> World Bank 2021a.

<sup>19</sup> UNDP 2021.

other regions and the three early rounds of the survey.<sup>20</sup> Among firms that stayed open, hours of operation dropped significantly, with 57 percent reporting reduced hours compared to 35 percent in June 2020. In addition, post-lockdown reopening was gradual, with only 71 percent of the firms fully open compared to 90 percent in January 2021. Among the function firms, up to 22 percent reported difficulty filling orders due to issues with suppliers and supply chains. Complicated travel restrictions imposed by provincial authorities contributed to delays in the supply chain.

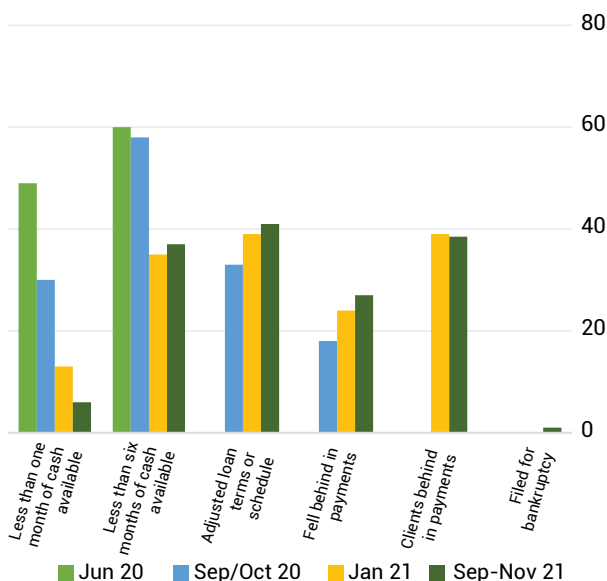
**The impact on sales was considerable, and most seriously affected firms in HCMC, smaller firms, and firms in the service sector.** Overall sales declined 39 percent during September–November 2021 compared to 2019, and slightly more severely than reported in the June 2020 survey. Sales in HCMC contracted by 50 percent, while in Hanoi sales fell by about 38 percent, clearly associated with the severity of the lockdowns in these two cities. Smaller firms lost over 40 percent of their sales relative to 2019 (figure 1.12, above). Firms in the services sector (commerce and other services) experienced the sharpest decline in sales (over 40 percent) compared to 2019. Firms in the manufacturing sector lost about 27 percent in sales compared to 2019, while firms in agriculture were the least affected (a 20 percent decline in sales).

**Cashflow deteriorated only slightly thanks to support policies and firms' more cautious management.** The relationship between sales and cashflow appears to have weakened as firms seem to have used government support policies better and learned to better manage their cashflow as the crisis has progressed (figure 1.13). In fact, 57 percent of firms report having received some support from the government compared to 19 percent in June 2020 and 36 percent in January 2021. Most of this support was from tax deferrals (33.6 percent of firms) and corporate income tax (CIT) reductions (33.4 percent of firms). Of the firms that did not benefit from the support policies, only 9 percent claimed they did not know about them, about 50 percent stated they were not eligible for benefits, and 26 percent cited difficult procedures. In the meantime, access to credit remained low despite ample liquidity in the market.

**Despite the severe shock, firm net entry remained positive but decreased significantly at the height of the April outbreak.** After showing resilience through the first 15 months of the crisis, the number of newly established formal firms fell by 50 percent in the Q3-2021 (figure 1.14). Fewer firms resumed their businesses while more had to temporarily suspend their operations in Q3-2021 than a year ago. Both trends are attributed to the extended lockdown. Interestingly, firm exit numbers also decreased, though at a slower pace than firm entry, potentially reflecting restructuring attempts, delayed official registration of business closure, or both. As economic and administrative activities resumed after the lockdown, net firm entry increased in Q4-2021. The number of newly established formal firms bounced back while the number of firms exiting the market also rose, but at slower pace than firm entry. More businesses resumed than suspended operations.

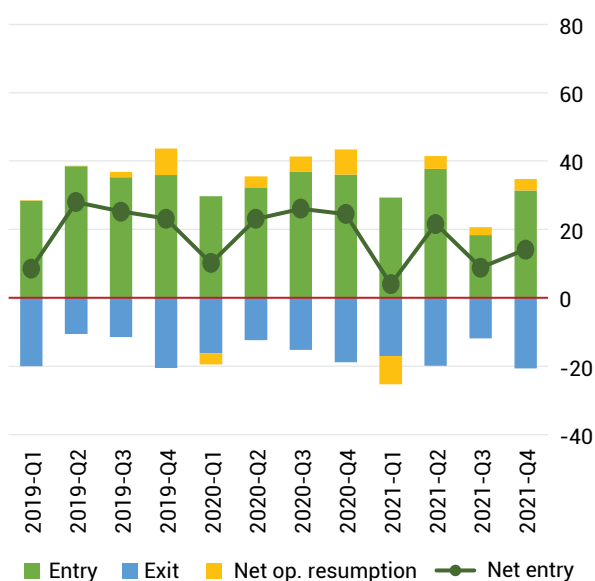
20 This information is from the World Bank's COVID-19 Business Pulse Surveys, Report N 4, November 2021. This is the fourth round of surveys, undertaken during September–November 2021. The earlier surveys took place in June 2020, September/October 2020, and January 2021. The survey responses were collected both during and after lockdowns and responses were therefore presented accordingly. The survey covered 458 firms, of which 47.2 percent were small, 27 percent were medium-sized, and 25.8 percent were large. Agriculture (13 percent), manufacturing (40 percent), commerce (23 percent), and other services (24.3 percent) were included. Geographically, 21.4 percent of the firms were in HCMC, 29.3 percent were in Hanoi, and 49.3 percent were in other parts of the country.

**Figure 1.13. Financial indicators**  
Share of firms in percent



Source: World Bank 2021a.

**Figure 1.14. Firm entry and exit**  
Thousands of firms (NSA)



Sources: GSO and World Bank staff calculations.

Note: Entry refers to new firms only; exit consists of firms waiting for dissolution and firms that completed the dissolution process, and exit is indicated by a minus sign; net operation process is the number of existing firms resuming their operations minus the number of existing firms temporarily suspending their operations; net entry is the sum of the three. LF = labor force; NSA = not seasonally adjusted.

**Finally, while firms face higher uncertainty and expect higher future payment issues and face bankruptcy risks, they also appeared to regain confidence once the lockdowns ended.** The survey shows that there is higher uncertainty about sales recovery and lower expected investments in the next six months, with smaller firms intending to reduce their investment by 5 percent compared to reductions of 4 percent and 3 percent in planned investments for medium and large firms, respectively. In the latest survey round, about 33 percent of firms expected to fall into arrears in the next six months compared to 24 percent in January 2021. The survey also shows that confidence among firms steadily improved by about 20 percent when comparing before and after the October 1st reopening.

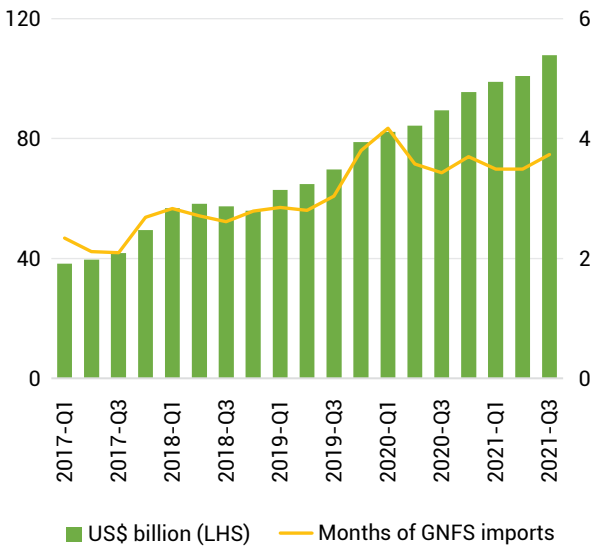
### The external position has remained strong, but the current account surplus has deteriorated sharply

**Vietnam's external position remained strong in the first nine months of 2021 but has weakened compared to 2020.** The country's international reserves have risen by an estimated US\$12.3 billion since December 2020, reaching an estimated total of US\$107.7 billion (equivalent to 3.7 months of imports) by the end of September 2021 (figure 1.15)<sup>21</sup>. Year to date, the real effective exchange rate (as measured by the World Bank's methodology for a basket of major trade partners) has appreciated by about 4.4 percent, offsetting the 7.3 percent depreciation between May 2020 and January 2021.

21 IMF 2021. This includes SDR 1,105.2 million (equivalent to US\$1.6 billion) allocated by the IMF in August 2021.

**The current account deteriorated from a comfortable surplus in 2020 to a deficit in 2021.** The current account posted an estimated deficit of US\$7.8 billion in the first nine months of 2021 (figure 1.16). This deficit was mainly due to a deterioration of the merchandise trade balance, which partly reflected recovering domestic consumption and private investment in the first semester of 2021 (figure 1.17). In the third quarter, the worsening merchandise trade balance was largely associated with a significant export slowdown due to the lockdowns and with a 5.7 percent fall in the terms of trade,<sup>22</sup> as import prices rose faster than export prices (up 9.5 percent and 3.7 percent, respectively). Despite the continuing deterioration in the terms of trade, merchandise trade balance improved in Q4-2021 thanks to a strong rebound in exports (19 percent), exceeding import growth (16 percent). Concurrently, services exports continued to be severely affected by international travel restrictions, while increased costs of international transport and insurance (up 34.2 percent) increased service imports in 2021. While official data are not yet available, the current account is estimated to have recorded a deficit of one percent of GDP in 2021 despite the strong recovery of exports and the resilience of remittances, which are estimated to reach US\$18.1 billion in 2021, or about 5 percent higher than in 2020. The steep current account deterioration—from a surplus of 4.6 percent of GDP in 2020 to about one percent of GDP deficit in 2021—is expected to be offset by a large surplus in the financial account thanks to resilient, albeit slightly lower FDI with disbursements of about US\$19.7 billion in 2021, and large short-term capital inflows (in the form of deposits and short-term loans) (figure 1.18).<sup>23</sup>

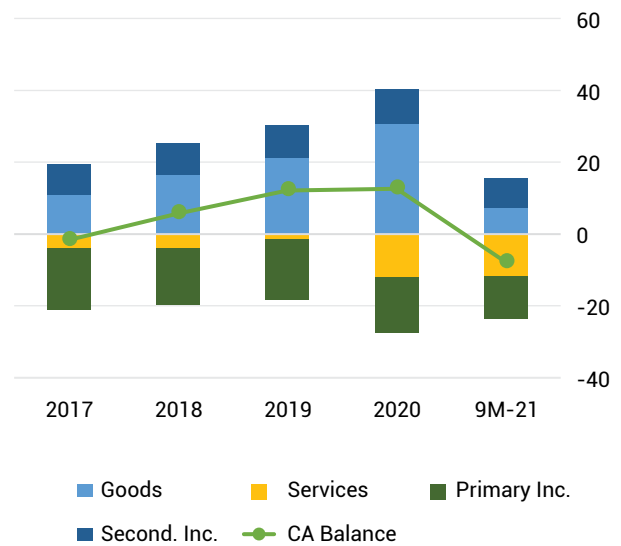
**Figure 1.15. International reserve accumulation**



Sources: IMF; Haver Analytics; and World Bank staff calculations.

Note: GNFS = goods and non-factor services; LHS = left-hand scale.

**Figure 1.16. Current account decomposition**  
US\$ billion (NSA)



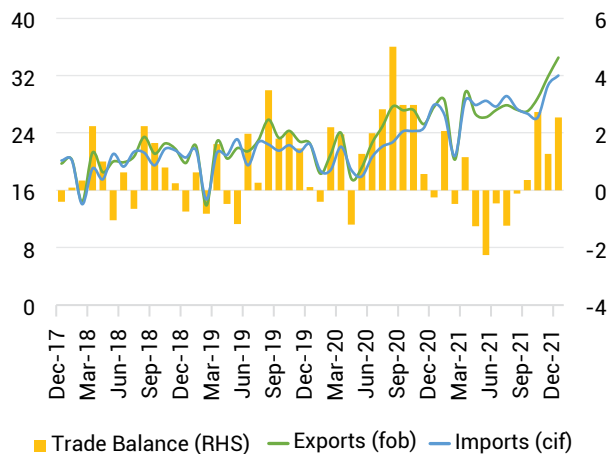
Sources: SBV; GSO; Haver Analytics; and World Bank staff calculations.

Note: CA = current account; NSA = not seasonally adjusted.

22 Export prices are free-on-board (fob) while import prices are costs, insurance, and freight (cif), and both are in U.S. dollars. Terms of trade is the ratio between the export price index and import price index.

23 According to the Bank for International Settlements, total foreign claims on Vietnam increased by US\$6.9 billion in the first half of 2021, compared to US\$1.0 billion in the same period last year. The increase was predominantly in the form of loans and deposits denominated in U.S. dollars to both banks and nonfinancial sectors, thereby providing an ample supply of U.S. dollars to the domestic market.

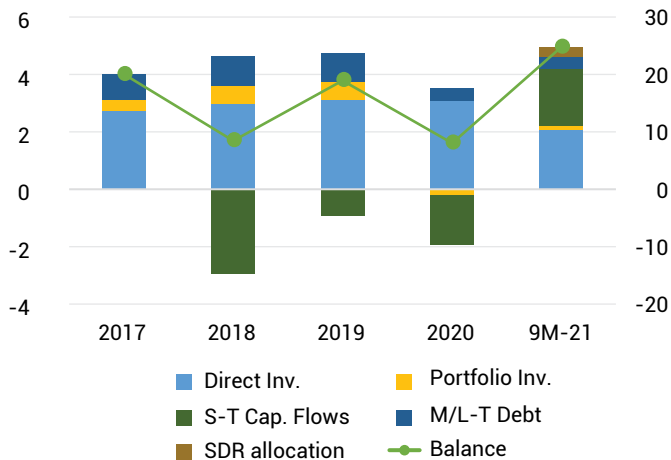
**Figure 1.17. Merchandise Trade Balance**  
US\$ billion (NSA)



Sources: Vietnam Customs; GSO; Haver Analytics; and World Bank staff calculations.

Note: Data in December 2021 are preliminary estimates. NSA = not seasonally adjusted; RHS = right-hand scale.

**Figure 1.18. Financial account decomposition**  
US\$ billion (NSA)



Sources: SBV; Haver Analytics; and World Bank staff calculations

Note: Net short-term capital inflow is the sum of net currency and deposit liability and short-term loans minus net investment assets other than direct and portfolio investment. FDI = foreign direct investment; M/L-T Debt = medium/long-term debt; NSA = not seasonally adjusted; S-T Cap. Flows = short-term capital flows; SDR = Special Drawing Rights.

### While exports have been resilient, the April COVID-19 shock temporarily affected their growth and reinforced a compositional shift to higher-tech products

**Merchandise exports slowed in Q3 due to the lockdowns but rebounded strongly in Q4 as the economy re-opened.** Merchandise exports grew strongly in the first two quarters but slowed from 20.4 percent in June 2021 to -0.5 percent in September, mainly because major manufacturing-for-export hubs in southern provinces shuttered factories and transport services, creating supply constraints.<sup>24</sup> This slowdown was a significant setback in the context of the strong global recovery, particularly in the United States, Vietnam’s biggest export market. In fact, Vietnam’s exports to the United States increased by barely 0.4 percent in Q3-2021. This effect was exacerbated by a slowdown in global trade and rising competition associated with the reentry of old competitors into the export markets. However, exports started to recover rapidly once the restrictions eased in late September, increasing by 19 percent in the last quarter of the year.

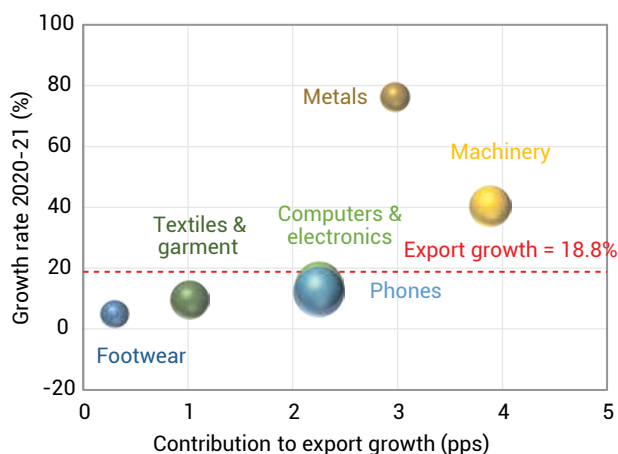
**The April outbreak boosted the shift of Vietnamese exports toward higher-end products.** Since the onset of the pandemic in 2020, electronics and machinery have become the major drivers of export growth as social distancing measures and work-from-home practices shifted external demand from traditional, low-technology products to those with more advanced technology. In the wake of the April 2021 outbreak, this trend was accelerated because of supply-side constraints in low-tech industries. Low-technology products like garments and footwear have more labor-intensive production processes and thus were more affected

<sup>24</sup> Another potential factor explaining the slowdown of exports is the base effect, as exports performed exceptionally well in Q3-2020 (up 34.4 percent quarter over quarter and 10.7 percent year over year).

by public health measures. Due to their large workforce, it was harder and more costly for these firms<sup>25</sup> to maintain their factory operations while complying with social distancing mandates. As a result, their exports dropped by 9.8 percent and 27.2 percent, respectively, in Q3-2021. Since reopening in October, these firms have faced labor shortage and value chain disruptions, making it difficult to reach their full production capacity quickly. Meanwhile, phones and machinery-maintained growth rates of 7.7 percent and 15.9 percent, respectively, while exports of computers and electronics fell by only 0.2 percent in Q3-2021. High prices boosted exports of metal and metal products significantly (up 87.8 percent in the same quarter) (figure 1.19). The United States and China remained the two largest destinations for Vietnamese exports, contributing the most to export growth. After declining in 2020, exports to Association of Southeast Asian Nations (ASEAN) and the Republic of Korea rebounded strongly, exceeding their pre-pandemic levels, while those to the EU and Japan remained lower than during the same period in 2019 (figure 1.20).

**FDI inflows have remained resilient since the onset of the crisis and despite the April 2021 outbreak, suggesting continued confidence in Vietnam’s economic potential.** Overall, the country attracted US\$31.1 billion in FDI commitments in 2021, a 9.2 percent increase compared to 2020 (figure 1.21). Resilient FDI commitment was driven by investment in manufacturing and a rise in electricity generation (figure 1.22).<sup>26</sup> As observed last year since the onset of the pandemic, the FDI composition continued to shift from mergers and acquisitions (M&A) to greenfield investment (that is, newly registered, and additionally registered capital), partly reflecting investors’ concerns about the weakening domestic consumption, while external demand was booming. In 2021, FDI disbursement remained 1.2 percent lower than in 2020, reflecting the effects of stringent mobility restrictions in major economic centers associated with the Q3 lockdown.

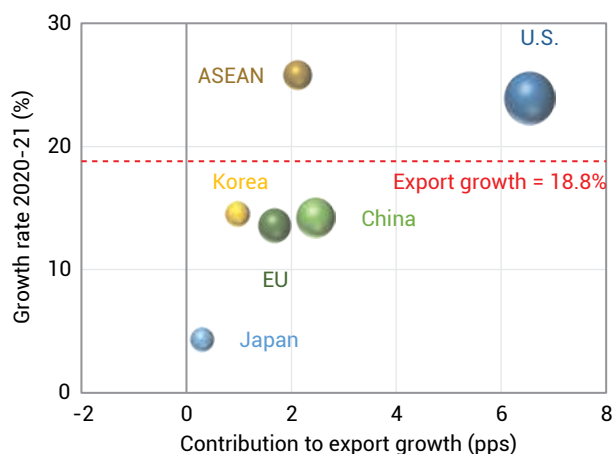
**Figure 1.19. Exports by product**



Sources: Vietnam Customs; GSO; Haver Analytics; and World Bank staff calculations.

Note: Bubble size indicates export value in 2021.

**Figure 1.20. Exports by destination**



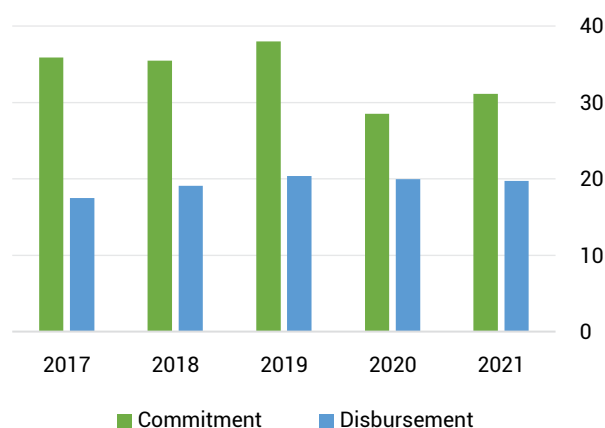
Sources: Vietnam Customs; GSO; Haver Analytics; and World Bank staff calculations.

Note: Bubble size indicates export value in 2021.

25 Including the “three-on-site” model in which workers must eat, sleep, and work at workplaces.

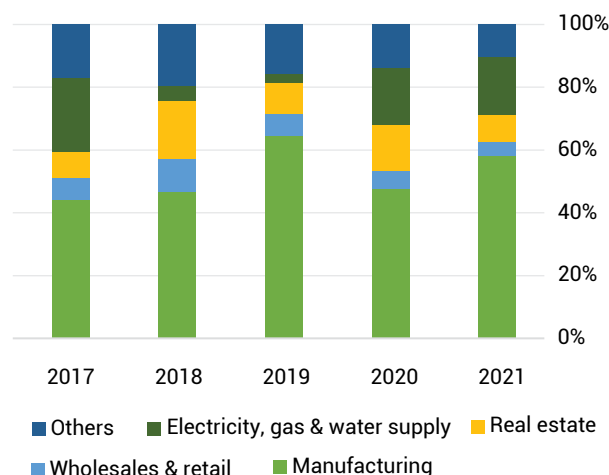
26 Including two large-scale electricity plants worth a total of US\$4.4 billion in 2021, following a US\$4.0 billion project last year.

**Figure 1.21. Foreign direct investment commitment and disbursement**  
*US\$ billion*



Sources: MPI; Haver Analytics; and World Bank staff calculations.

**Figure 1.22. Foreign direct investment commitment by sector**  
*Percent of total*



Sources: MPI; Haver Analytics; and World Bank staff calculations.

### Rapid monetary and credit expansion, while inflation has remained subdued

**The State Bank of Vietnam (SBV) has continued its accommodating monetary policy in 2021 to support businesses during this persistent crisis.** It kept the refinancing interest rate at 4.0 percent and encouraged commercial banks to waive or reduce interest rates and fees to assist businesses affected by the COVID-19 pandemic. It also continued to provide guidance on forbearance on loan terms—cheaper loans or restructuring existing loans—that were issued in the wake of the COVID-19 pandemic. Those policy supports helped maintain strong credit growth and ensure ample liquidity in the market. Credit growth was estimated at 13.0 percent in December 2021, exceeding the unofficial target of 12 percent.

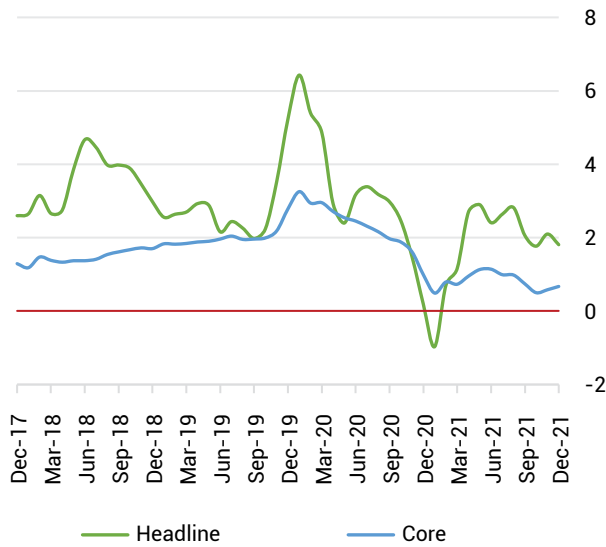
**Despite rapid monetary growth and rising commodity prices, the Consumer Price Index (CPI) remained well below the 4.0 percent target policy rate due to stable food prices and weak domestic demand.** CPI inflation accelerated from -1.0 percent in January to 2.9 percent in May 2021, fell through Q3-2021, and settled at 1.8 percent in December (figure 1.23). The initial acceleration of inflation was mainly driven by rising costs of housing and construction materials and transport in response to surging metal and energy prices on the world market. In the wake of the April outbreak, fuel prices continued to increase (with gasoline and diesel prices up 51.3 percent in October 2021 compared to a year ago), pushing up the cost of transport. However, softening demand for housing and reduction in rents and utility tariffs to support households affected by the lockdown offset the fuel price increase. Food prices, which accounted for a 36.1 percent CPI basket, have been mostly stable in 2021, contributing to keeping inflation in check.

**Rising input prices, however, caused manufacturing producer prices to accelerate, highlighting the need for increased productivity to remain competitive in the export markets.** Manufacturing producer prices accelerated from -0.3 percent in Q4-2020 to 4.0 percent in Q4-2021, following the rising price of its inputs with a one-quarter lag. The rising prices of inputs could be partly attributed to soaring fuel and other commodity prices in the world market and the heavy reliance of Vietnam’s production on imported raw materials and intermediate products (figure 1.24). Imported fuels were almost 55 percent more expensive in Q4-2021 than a year ago, while prices of some manufacturing products posted double-digit year-over-

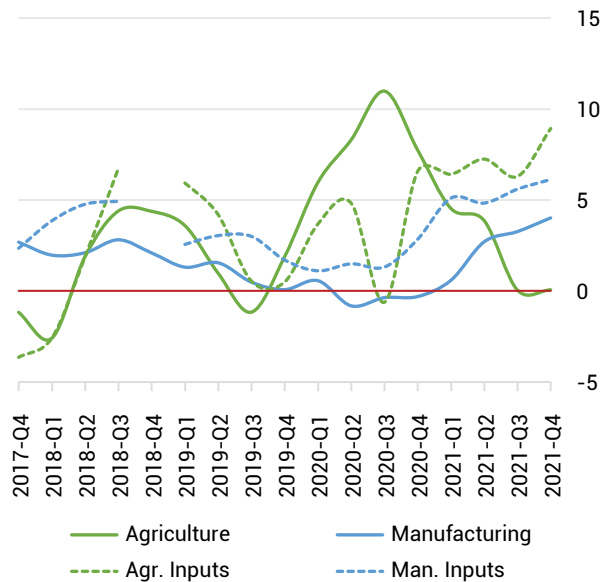
year<sup>27</sup> growth rates (figure 1.25).<sup>28</sup> Since it takes time for the producer prices to fully reflect the rising price of inputs, close monitoring of price levels is warranted as the economy emerges from the crisis. Improving productivity of production can help exports remain competitive despite potential increases in production costs.

**The Vietnamese dong strengthened slightly during the year.** After depreciating by 7.3 percent between May 2020 and January 2021, the real effective exchange rate rose by 4.4 percent between January and November, mirroring the movement of U.S. dollar, a reflection of U.S. importance as Vietnam’s main export market (figure 1.26). The average nominal official market rate (VND/US\$) appreciated by about 1.4 percent between August and November in response to an increase in the supply of U.S. dollars in the market. In effect, on 11 August 2021, the SBV lowered the rate at which it would buy U.S. dollars from commercial banks by VND 225 (or 1 percent). Starting from 1 September 2021, the interest rate on commercial bank’s excessive reserves in foreign currencies parked at the SBV was also reduced from 0.05 percent to zero percent, supporting the availability of U.S. dollars in the market. The nominal appreciation of the dong during the crisis might also reflect recovering remittance and resilient FDI inflows, two important sources of U.S. dollars, which may be offsetting the sharp trade balance deterioration. Remittance inflows to Vietnam are estimated by the World Bank to reach US\$18.1 billion in 2021 (a 5.0 percent increase).

**Figure 1.23. Consumer price index**  
Percent (y/y, NSA)



**Figure 1.24. Producer price indexes**  
Percent (y/y, NSA)



Sources: GSO; Haver Analytics; and World Bank staff calculations.

Note: Core inflation excludes food and foodstuff, energy, and items whose prices are managed by the government. NSA = not seasonally adjusted; y/y = year-over-year

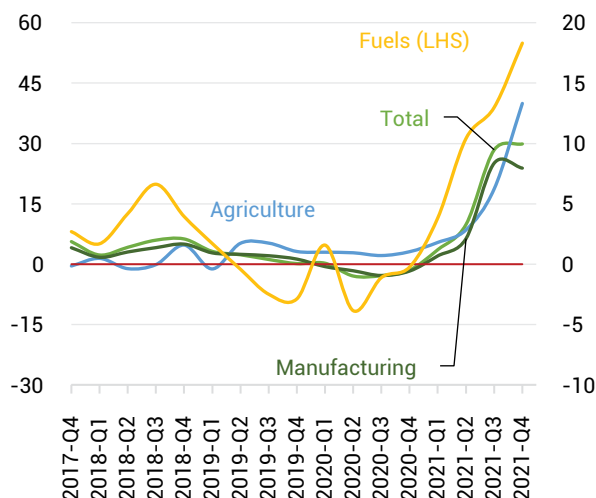
Source: GSO.

Note: Data on price of raw materials and fuels in Q4-2018 are not available.

27 All growth rates are year-over-year unless indicated otherwise.

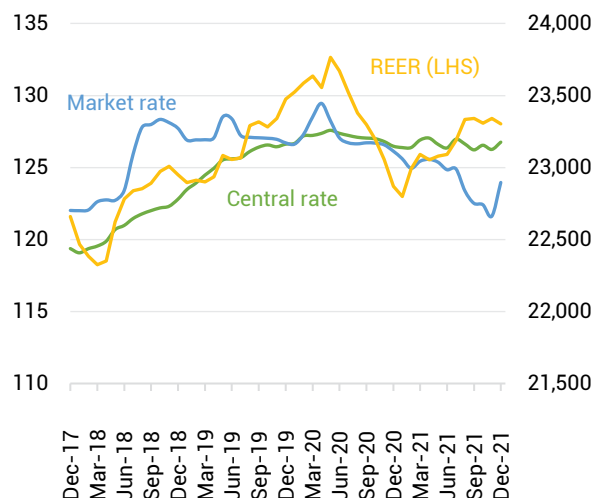
28 Those manufacturing products include animal fodder and materials, chemicals, plastic materials, wood and wooden articles, fibers, iron and steel, and electrical wire and cable.

**Figure 1.25. Merchandise import price indexes**  
Percent (y/y, NSA)



Source: GSO.

**Figure 1.26. Exchange rate evolution**



Sources: SBV; Vietcombank; Haver Analytics; and World Bank GEM database.

Note: Central rate is the SBV's central VND/US\$ rate. Market rate is the average of buying and selling spot VND/US\$ exchange rate posted by the Vietcombank. LHS = left-hand scale; REER = real effective exchange rate. A lower REER and a higher nominal exchange rate mean depreciation.

### Banking sector profitability remains sound, but risks to asset quality from rising nonperforming loans warrant close monitoring

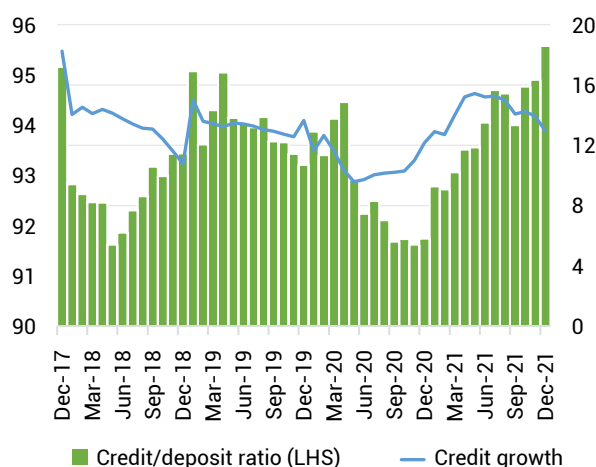
**Banking sector profitability has remained solid thus far.** Profitability ratios recovered from a blip in mid-2020 and continued to expand in 2021. Among reporting banks, net interest margin expanded from 2.93 percent in the first half of 2020 to 3.68 percent in the first half of 2021. Similarly, return on assets and return on equity expanded to 1.47 percent and 20.6 percent in the first half of this year, from 1.1 percent and 16.0 percent, respectively, in 2020. One explanation for the margin of expansion is that deposit interest rates fell faster than loan interest rates because of SBV policy. Funding from deposits grew more slowly (8.4 percent in December 2021), likely due to lower deposit interest rates (figures 1.27 and 1.28).

**However, the forbearance measures can delay the identification and recognition of nonperforming loans (NPLs), and the impacts of the April COVID-19 outbreak have not been fully reflected.** The preliminary NPL ratio for Q2-2021 is 3.66 percent, including 1.93 percent of legacy NPLs held by Vietnam Asset Management Company (VAMC)<sup>29</sup> and 1.73 percent of NPLs on commercial banks' balance sheets. It is a slight fall from 3.81 percent in 2020, mainly due to the loan growth amidst loose monetary policy, rather than from the reduction in the amount of NPLs. Also, given the forbearance policy, the SBV continues to monitor the restructured loans and NPLs closely. It reports that as of June 2021, restructured loans comprised around 3.3 percent of the total loan book. Some of these restructured loans might have already become NPLs had the forbearance measures not been in place. The SBV has estimated that the adjusted NPL ratio would

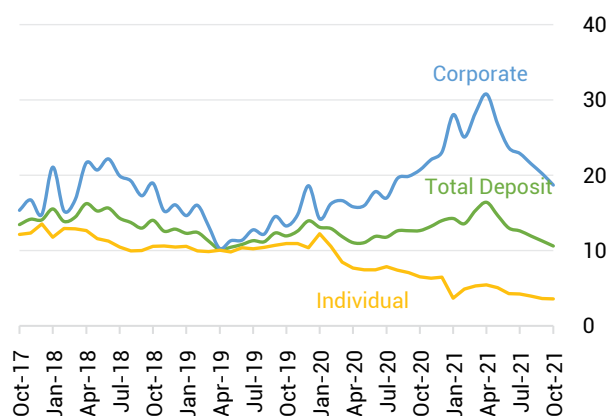
29 VAMC is an entity established in 2011/12 to hold NPLs from problem banks.

have been 7.21 percent in the Q2-2021 if potential NPLs from restructured loans were included. The SBV has not published an official number of systemwide NPLs with sufficient granularity since October 2020, raising concern that there may be wide disparities in calculation and reporting practices.

**Figure 1.27. Credit growth**  
Percent (EOP, NSA)



**Figure 1.28. Deposits at credit institutions**  
Percent (y/y, EOP, NSA)



Sources: SBV; Haver Analytics; and World Bank staff calculations.

Sources: SBV; Haver Analytics; and World Bank staff calculations.

Note: Credit growth is year-over-year. LHS = left-hand scale; NSA = not seasonally adjusted; EOP = end of period.

Note: EOP = end of period; NSA = not seasonally adjusted.

**Thin capital buffers and varied provisioning coverage ratios among banks mean that some banks may not be able to sustain significantly higher NPLs.** Among banks that publish their financial statements, the loan-loss reserve levels<sup>30</sup> vary widely between 31 percent and 243 percent to NPLs. Further, additional provisioning from NPL increases would affect banks’ profitability and capital base.<sup>31</sup> Unfortunately, Vietnam’s banks have low capital buffers, considering the capital adequacy ratio of around 11.3 percent (Q1-2021) compared to 16 to 24 percent in peer ASEAN+5 countries. Recapitalization should be considered to strengthen banks’ balance sheets and to enable them to fund the economic recovery.

### Fiscal policy was contractionary most of the year, despite the availability of substantial fiscal space

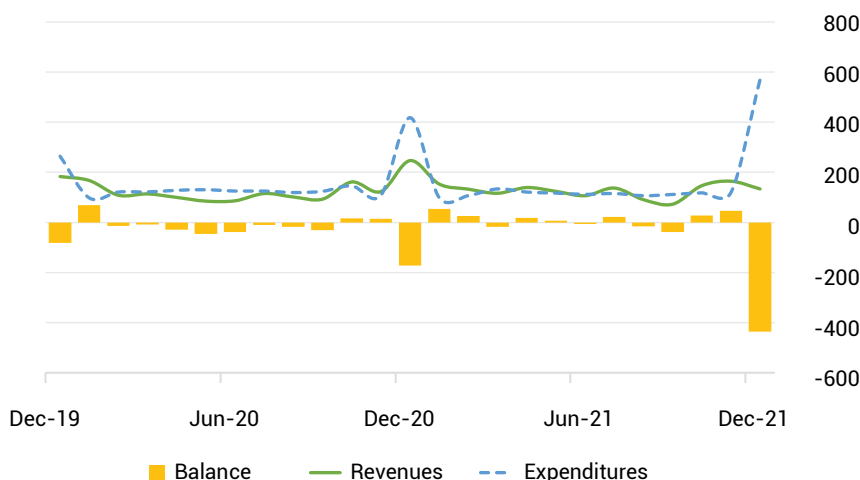
**In the first 11 months of 2021, Vietnam’s fiscal stance was contractionary, compounding the effect of Q3 lockdown on the economy.** During the first semester, the authorities ran a small budgetary surplus, spending less and collecting taxes as the Vietnamese economy expanded by a robust 5.6 percent, driven mainly by the private sector, while the contribution of net exports to growth diminished (figure 1.29). Over the first 11 months of the year, the budget registered a fiscal surplus of VND 120.3 trillion (US\$5.2 billion). The authorities announced that over the first eleven months, total collected revenue exceeded the annual plan for 2021 by 3.4 percent. The sharp revenue increase reflects the robust performance in the first half of 2021, while Q3 revenues fell slightly due to the lockdowns. Total expenditures were estimated to contract

30 The amount of reserves set aside to cover potential losses from NPLs.

31 Per SBV rules, starting at the end of 2021, banks will have to gradually begin provisioning for potential losses from impaired loans because of COVID-19.

by 7.4 percent. The faltering execution of the budgeted expenditures—especially the recurrent budget—appears to be partly due to rigidities in the budgetary process that do not permit swift reallocation of funds in times of crisis. The investment budget was slow to disburse in the first half of the year and was further hampered by the lockdowns during Q3-2021 and faces systemic implementation challenges (see below).

**Figure 1.29. Aggregate budget execution**  
VND trillion



Source: MOF and WB staff calculations

**The authorities responded belatedly to the unfolding crisis with small fiscal packages in July, September, and November 2021, which were not always well implemented.** The total planned packages as of October 2021 were about 2.5 percent of GDP, compared to 4.5 percent of GDP in 2020. The relatively small packages to support businesses in April (mainly renewing temporary tax deferral measures) were used by beneficiaries, but essentially have no cost to the government. The package for households and informal workers in July (about US\$1.2 billion) was not fully used due to implementation challenges. In September, several additional fiscal support measures were adopted, including a VND 21.3 trillion (about US\$925 million) financial support package that came into force in October. This package comprises mostly a tax reduction and an exemption for household businesses, small and medium-sized enterprises with falling revenues, and firms in hard-hit service sectors. The authorities also approved a 30 percent reduction in land rents for firms and households affected by the current outbreak. Of this overall package worth 2.5 percent of GDP, about 1.8 percent of GDP is estimated to have been used in the first 10 months of the year (table 1.1). In addition to the packages, the Vietnam Social Security electronically disbursed about US\$1.25 million (or 0.3 percent of GDP) to formal workers in October and November.<sup>32</sup>

32 As of 25 Nov 2021, about 99 percent of the funds were disbursed (VND 28.9 trillion or about US\$1.25 billion).

**Table 1.1. Fiscal measures in 2020 and 2021 (Planned and Implemented)**

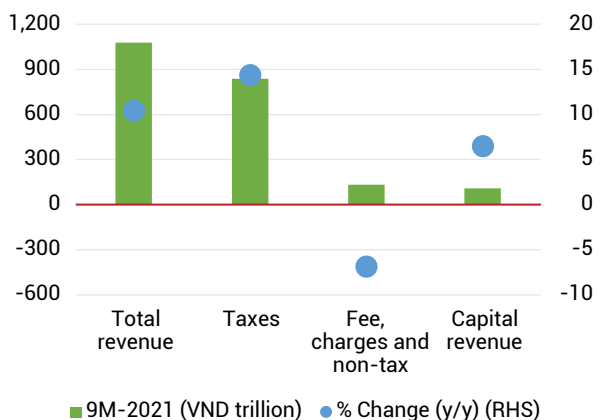
Measure	Planned	Implemented	Planned	Implemented
	2020	2020	2020	2020
	% GDP	% GDP	% GDP	% GDP
<b>Revenue Measure</b>	4.0	1.8	2.2	1.5
Tax (CIT, PIT, VAT) and land rent deferral	2.9	1.1	1.8	1.2
Excise tax deferral for automobiles produced or assembled domestically	0.3	0.3		
Exemption and reduction of taxes (CIT, PIT, environment protection tax, trade taxes), fees and charges, and land rents	0.8	0.4	0.4	0.0
Continuation of policies issued in 2020				0.2
<b>Expenditure Measure</b>	0.6	0.2	0.3	0.3
Direct income support for households (including transfer to informal workers)	0.6	0.2	0.3	0.3
<b>SUBTOTAL:</b>	<b>4.5</b>	<b>2.0</b>	<b>2.5</b>	<b>1.8</b>
<b>COVID-19 containment and vaccine procurement</b>	0.1	0.1	2.0	1.0
<i>Allowances to medical and other staff and amenities for quarantined individuals and materials and equipment</i>	0.1	0.1		
<i>Vaccine procurement</i>			0.3	
<b>TOTAL</b>	<b>4.6</b>	<b>2.0</b>	<b>4.5</b>	<b>2.8</b>
VSSF Cash transfer to support formal workers who participated in Unemployment Fund				0.3

Sources: MOF; MOLISA; IMF; and World Bank staff calculations.

Note: Data are as of 30 October 2021. VSSF = Vietnam Social Security Fund.

**On the revenue side, 2021 planned tax collection is expected to reach 16.5 percent of GDP for the year, lower than the 16.9 percent achieved in 2020 and well below the high of 18.6 percent in 2019.** Authorities argue that the much lower planned tax collection reflects the crisis-related losses in the CIT and VAT tax bases, which would presumably take several years to recover, as well as diminishing oil taxes going forward. Figure 1.30 highlights that collection of taxes and capital revenues in the first nine months of 2021 had surpassed collections in the same period last year by 14.4 percent and 6.5 percent, respectively. By the end of September, the authorities had collected 81 percent of planned taxes for 2021. Figure 1.31 captures the impact of the crisis on various taxes in the first nine months of the year and compared to the same period in 2020. It also highlights the collection drive with VAT collections up 15.4 percent and CIT collection up 22.4 percent compared to the first nine months of 2020. There is also an increase in trade taxes, associated with the increase in imports noted during the year. The Ministry of Finance, however, projects that it will face a tax collection shortage by year's end, when the major bulk of the CIT is due.

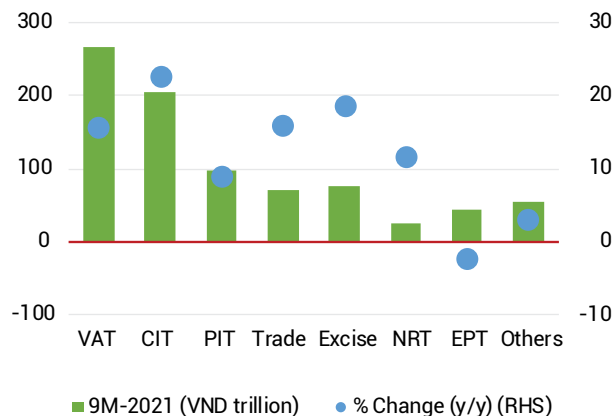
Figure 1.30. State budget revenues, 2020–2021



Sources: MOF and World Bank staff calculations.

Note: RHS = right-hand scale.

Figure 1.31. Tax collection by type of tax, 2020-2021



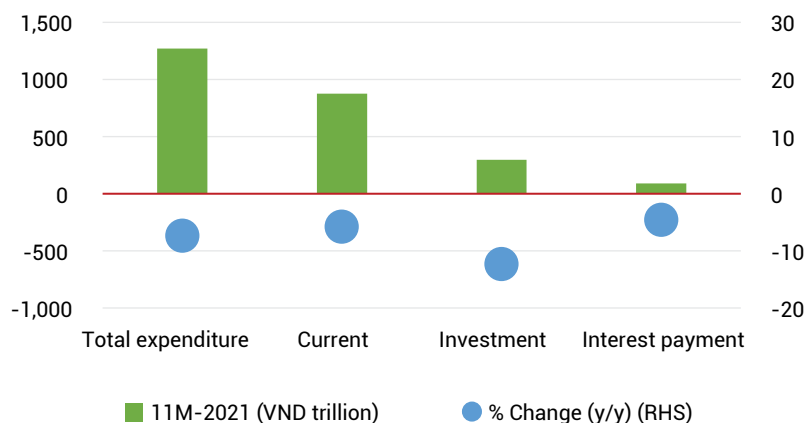
Sources: MOF and World Bank staff calculations.

Note: CIT = corporate income tax; EPT = environmental protection tax; NRT = natural resources tax; PIT = personal income tax; RHS = right-hand scale; VAT = value added tax.

**On the expenditure side, 2021 highlighted weaknesses in spending the planned budget in both the current and investment categories.** Total expenditures reached 75.2 percent of annual target in the first 11 months of 2021; a 7.4 percent decline compared to the same period of 2020 (figure 1.32). While current expenditures contracted by 5.8 percent (y/y), investment expenditures fell by 12.3 percent (y/y). The fall in current expenditures may partly reflect savings related to cancelled travel and conference attendance due to the COVID-19 pandemic. It is also partly due to budget rigidities that did not allow moving funds across budget units without approval by the NA standing committee and People’s council<sup>33</sup>, a process that is lengthy. This lengthy process undermines the ability of the authorities to respond to crisis promptly. Capital investment experienced a very low execution rate during the first semester of 2021, partly related to the fact that 2021 is a first year of the new five-year planning cycle and partly due to public investment management challenges (Box 1.1). This low execution rate was exacerbated by the third quarter COVID-19-related lockdowns. Post-reopening, the authorities have tried to accelerate investment disbursement, managing a 150 percent y/y increase in November. In the first 11 months of 2021, disbursement of the capital budget stood at 63.9 percent of the prime minister’s target (of the budget) compared to 71.2 percent in the first 11 months of 2020.

33 Article 52 and 53 of the state budget law allow budget to be reallocated within budgetary units and within the total budget that has been approved. If the expenditure is expected to exceed the budget plan for the unit or budget needs to be reallocated between budget units, it has to be approved by the National Assembly’s Standing Committee or the People’s Council. This reallocation can be a lengthy process. No reallocation between capital and recurrent expenditure is allowed without approval by these entities.

Figure 1.32. Expenditures



Sources: MOF and World Bank staff calculations.

Note: RHS = right-hand scale.

**The government has ample fiscal space and debt remains sustainable.** The existing fiscal space is partly due to several years of underspending of the investment budget, which helped reduce debt from a high of 63.7 percent of GDP (non-revised) in 2016 to 55.3 percent in 2020, well within the 65 percent debt-to-GDP threshold set by the National Assembly. The reforms also lengthened the maturity and increased domestic ownership of the debt stock.

**While the budget recorded a surplus in the first 11 months of the year, year-end government fiscal account registered a deficit of 4.8 percent of GDP<sup>34</sup>.** Revenue collections was one percent higher in 2021 than in 2020 while at the same time, the authorities tried to increase expenditures after the re-opening. For example, total expenditure increased by 9.4 percent in November for the first time since April 2021 thanks to the acceleration of public investment disbursement (up over 150 percent). However, by end November 2021 disbursement of the capital budget remained about 36 percent lower than the target set by the Prime Minister and it appears unlikely that large volume of investments could be executed fully in 2021. Nevertheless, the Ministry of Finance’s (MoF) reported an estimated 570 trillion VND (US\$24.6 billion) in expenditures in December 2021, leading to a deficit of about VND 316 trillion (US\$13.6 billion) for the year. Since the investment budget is expected to have an underrun, the large expenditure registered in December would appear to be mainly associated with large carry-over expenditures from 2021 to 2022. It also includes some capital expenditures that are to be executed by end of January 2022 as well as the disbursement of investment projects carried over from previous years to 2021. These deficit estimate may be revised when the government releases its final revisions of the 2021 budget. The 2019 deficit was adjusted by about 3.5 percent of GDP after final budget reviews. The debt-to-GDP ratio is estimated to increase from 55.3 percent in 2020 to about 57.6 percent in 2021, and debt remains sustainable.<sup>35</sup>

34 Annual budget data in 2021 were reported by MOF on 22 December 2021 and sourced from GSO’s socio-economic report Q4-2021 published on 29 December 2021.

35 This report uses non-revised GDP in its calculations.

### Box 1.1. Addressing public investment management challenges

The constraints on the public investment management system are due to persistent allocative and operational inefficiencies despite the amendments in the Public Investment Law in 2019. Related to allocative inefficiency, there is a misalignment between resource allocation and development plans. This results in limited financial resources to several important projects that have regional spillover effects. In addition, the disconnection between capital and recurrent budget allocation causes under-provisioning of resources required for proper operation and maintenance. Operational inefficiency in the use of resources causes cost overruns, delays, and obsolete design or departures from specification. Also, flexibility for reallocating funds could be improved. While budget units have the authority to reallocate budget from one project to another if it is within the approved budget. If the amount exceeds the planned budget, the authorities need the approval from the Prime Minister or the Standing Committee of the National Assembly, which is a lengthy process. These inefficiencies are exacerbated by sequential and long approval procedures (some of which can be redundant), limited transparency in procurement procedures, limited supervision, and uneven evaluations.

Significant variations in the execution of the investment budget can be found across sectors and government levels. The slow disbursement rate is due to several factors. The long land clearance and resettlement procedures delay the preparation of the Medium-term Investment Plan (MTIP). Once projects are approved in the MTIP, they the MTIP project list is “fixed”, and they are allocated annual budget depending on their readiness to implement. The project implementing agencies need to submit a workplan / disbursement plan as a basis for annual budget allocation. However, these plans are often unrealistic and cannot be implemented. New project proposals trigger the MTIP adjustment, which needs to go through the approval process again.

A closer look at the disconnection between capital and recurrent budget (maintenance) allocation highlights that in most sectors, maintenance costs are not foreseen when budgeting for projects. There is no systematic approach to funding maintenance, which leads to underfunding of routine maintenance and ad-hoc periodic interventions for heavy repairs through the capital budget. The dual budgeting system, by which the MOF is responsible for the recurrent part and the Ministry of Planning and Investment for investment, is part of the reason for poor integration of capital and recurrent budgeting. This dualism is reflected at the level of spending and implementing agencies. There is no comprehensive and current asset registry specifying the condition of assets and infrastructure. There is a bias by both politicians and constituencies toward new projects rather than increasing the lifecycle of existing projects through more proactive maintenance.

Steps that can be taken to address these issues include:

- Develop and adopt a comprehensive, interministerial, and up-to-date asset registry specifying the condition of assets and infrastructure
- Implement a more systematic approach to forecasting the forward funding needs of ongoing projects, so that fiscal space for new projects can be more accurately projected
- Ensure that pre-feasibility studies, IPRRs and feasibility studies include estimates of the life-cycle operations and maintenance (O&M) costs of projects and that these are considered in decision making (that is, included in the proposed appraisal matrix), both at the time of the decision to fund an investment and in recurrent budget allocations when a project’s O&M is expected to be funded from the budget
- Streamline procedures for the approval of different steps of pre-feasibility studies and feasibility studies by fully decentralizing the authority to the provinces.
- Improve the land clearance process and allow more flexibility to add/remove projects in MTIP.

### III. Economic outlook and risks

**The short- to medium-term growth prospects of Vietnam's economy are positive, conditional on continued national vaccination, recovery of the domestic economy, and the evolution of the global economic recovery.** The pace of national vaccination should be kept up to ensure that a minimum of 70 percent of the population is fully vaccinated as soon as possible. At the current pace, while Vietnam is still behind in vaccination rates compared to some neighboring countries, this goal appears reachable within the first quarter of 2022, allowing a move to administering boosters.

**To ensure a successful short-term recovery of the economy the authorities need to address two challenges.** The supply-side constraints related to supply chain disruptions and labor shortages affect resumption of production post-reopening. However, these constraints appear to be smoothing out, with manufacturing production higher in November 2021 than a year ago. Nonetheless, lingering problems, such as continued labor shortages in some regions will need be smoothed out for the economy to rebound strongly in the short term. On the demand side, domestic private demand had not recovered to pre-2020 levels when the Q3 lockdown occurred, further damaging private confidence and incomes. To restore this confidence and incomes, coordinated fiscal and monetary policies would be helpful. Additionally, the authorities need to outline a plan to end the closure of international borders, which has been very costly to the economy. Tourism constituted about 10 percent of GDP in 2019 but has been hobbled by two years of border closures, with losses of incomes by employees and employers. The opening of international borders will allow business travel to resume with less hindrance. Also, for the economy to recover to pre-crisis growth trend, the tourism sector will need to start recovery and contribution to the economy again. Of course, such a strategy requires the continuous control of the pandemic during 2022.

#### A positive outlook for the economy

**GDP is expected to rebound to 5.5 percent growth in 2022 in a scenario where the pandemic is under relative control domestically and internationally (Table 1.2).** With the easing of mobility restrictions, the services sector is expected to partially recover as consumers and investors rebuild their confidence. Foreign tourism is also expected to resume gradually from mid-2022 onward, helping support the recovery of the tourism sector. Manufacturing exports will respond to the U.S., EU, and Chinese demand for Vietnamese exports. The United States, EU, and China are estimated to grow by 3.8, 4.4, and 5.1 percent, respectively, in 2022. The agricultural sector is expected to continue to grow at the same rate as in 2020–21, making a steady but small contribution to growth.

**The rebound of the economy will be supported by a more accommodating fiscal policy, at least in the first part of 2022.** As of early January 2022, the National Assembly was discussing a new support program for 2022-2023. The program is said to be substantive, but full official details of the scope and content were not available at the time of the finalization of this report. This program could include:

- **Tax policy measures** - such as tax breaks to small and medium-sized enterprises for the entirety of 2022 or a reduction of the value-added tax (VAT) for 2022 to prop up domestic private demand—are good short-term options. A temporary cut in the VAT rate from 10 percent to 5 percent would enhance domestic consumption, while increasing public debt by only 2 percent of GDP, which the government can easily afford given the ample fiscal space available. Also, to balance out the burden of COVID between labor and capital markets, taxing capital more fairly could be achieved by introducing a

small tax on financial transactions – the so-called Tobin tax in the economic literature. A financial transaction tax (of, say, 0.1 percent on all electronic financial transactions) would generate about US\$540 million, which could help replenish central government coffers and allow more adequate support to affected households and workers.

- **Expenditure measures** - short-term actions could include the implementation of recovery programs in health and education that have been highly penalized by the pandemic. For instance, the authorities could consider the distribution of tablets or digital tools to students or schools to promote online education. To ensure better targeting of the benefits to affected businesses and households, the government will need to start developing an integrated social protection database for further expansion of social services. In parallel, streamlining public investment management should be a priority to add flexibility to (re)allocate unused funds in case of urgency. Further clarity should be brought to the allocation of responsibilities between the central and local governments, including on regional initiatives such as in the Mekong Delta Region or cross-provinces transport projects.

**Such accommodating fiscal policy could be implemented without a major impact on fiscal and debt balances should remain sustainable in the short to medium term.** Part of the suggested increase in public spending could be funded by cash reserves accumulated by the government, without additional borrowing. For this reason, the fiscal deficit is projected at around 4.4 percent in 2022. Debt is not expected to increase substantially in real terms as the government still has cash on hand, has carryover funds, and so will have relatively moderate additional funding needs. As in recent years, most of these needs could be met by borrowing on the domestic markets.

**The accommodative monetary policy implemented in 2020–21 to help businesses during the crisis is expected to be unwound starting in mid-2022.** The return to a more prudent monetary policy will be justified by the greater use of the fiscal instrument and by the need to manage the increasing risks within the financial sector as commercial banks are exposed to an increase in non-performing loans in their portfolios. In fact, the authorities should ensure that banks are ready to implement an effective and early resolution to non-performing loans so that confidence in the banking system is not affected by the expiry of the forbearance measures. Monetary authorities are also expected to revert to a prudent policy to manage inflation as the nominal monetary aggregates have increased two to three times faster than the real economy since the beginning of the COVID-19 crisis, suggesting a correction in prices in the longer run.

**Inflation is expected to remain within the target of 4 percent set by the SBV.** Recent global price increases reflect some pandemic-related supply-demand mismatches and higher commodity prices compared to their low base a year ago. These price pressures are expected to subside in 2022. The pandemic-related price increases are expected to dissipate in the coming year, as production disruptions are resolved. While some of the recent global commodity price increases, such as the price of petroleum, may continue in the medium term, domestic demand is expected to improve gradually in 2022, only recovering fully in 2023, thus countering inflationary pressures. The authorities will need to monitor the rise of NPLs and bank asset quality to ensure banking sector health and to push for adoption of the Basle II capital rules for all operating banks.

**Table 1.2. Selected economic indicators, Vietnam, 2019–2023**

Indicator	2019	2020e	2021e	2022f	2023f
GDP growth (%)	7.0	2.9	2.6	5.5	6.5
Consumer Price Index (average, %)	2.8	3.2	1.8	3.6	4.0
Current account balance (% of GDP)	5.0	4.6	-1.0	1.7	2.0
Fiscal balance (% of GDP)	-0.5	-4.9	-4.8	-4.4	-3.5
Public debt (% of GDP)	55.0	55.3	57.6	58.8	57.2

Sources: GSO; MOF; SBV; IMF; and World Bank staff calculations

Note: The non-revised GDP is used in all calculations unless otherwise stated. e = estimate; f = forecast.

**In the medium term, full recovery of the economy to a pre-COVID growth path is only expected in 2023, with full recovery of the services sector and barring new shocks.** On the global front, beyond 2022, global growth is projected to moderate to about 3.2 percent over the medium term.<sup>36</sup> Advanced economies output is forecast to exceed pre-pandemic medium-term projections—largely reflecting sizable anticipated further policy support in the United States that includes measures to increase potential growth. This could translate into further manufacturing exports in 2023 onward for Vietnam since the United States is Vietnam’s main export market.

**As growth firms up, fiscal and monetary policies will revert to medium term objectives.** Fiscal authorities will proceed with medium-term consolidation efforts from 2023 onward. Monetary policy authorities will unwind the support extended to businesses during the crisis. Monetary authorities will need to ensure an appropriate NPL resolution framework is functional, continue to carefully monitor the rise of NPLs and bank asset quality to ensure banking sector health and push for the adoption of Basle II capital rules for all operating banks. The development of digital banking and of a national e-payment system would enhance financial inclusion, with positive effects on small and medium-sized businesses as well as informal businesses.

**The current account is expected to register small surpluses in the medium term thanks to a strong export performance and resilient remittances.** Given the strong dependence of Vietnamese exports on imported inputs, this surplus will be modest at about 1.5-2 percent of GDP in the medium term. Remittances are expected to contribute a steady US\$18 billion to US\$20 billion to the current account. The financial balance is expected to benefit from a steady FDI inflow, which has shown resilience during the pandemic, is expected to recover to pre-COVID levels. The attractiveness of Vietnam’s market as an investment destination is boosted by the myriad free trade agreements and by the post-COVID-19 changes in global value chains and the demand by many governments and multinationals to diversify their sources of production.

### But the balance of risks is tilted to the downside

**These economic prospects are subject to several downside risks.** The major source of uncertainty is the path of the pandemic, in that more aggressive SARS-CoV-2 variants could emerge before widespread vaccination is reached, forcing renewed social distancing measures, and slowing economic recovery in Vietnam and Vietnam’s main export markets. Continuing the rapid pace of initial vaccinations, administering

36 World Bank GEP, January 2022.

a booster dose to the population in 2022, and promoting the “five K good hygiene” national practices<sup>37</sup> will help diminish the risk of such new variants spreading in Vietnam. Resuming economic activity is also being complicated by value chain disruptions and labor shortages (supply-side shocks) and uncertainty about the path of the pandemic, including the new Omicron variant, which make consumers more cautious in purchasing (demand-side shocks). Outside Vietnam, there are two additional downside risks as the crisis persists into a third year. Many countries also have less room to use fiscal and monetary policy to deal with this persistent crisis, adding uncertainty and downside risks to the global recovery momentum, which again could affect Vietnam. Also, as the United States, the EU, and China experienced an economic rebound in 2021, they may start normalizing monetary and fiscal policy, which will affect their growth path in the medium term and tighten global financial conditions. Vietnam’s best defensive option in the face of external demand uncertainty is to leverage its existing free trade agreements to diversify its production base and its export destinations. This allows risks to be spread over a larger number of products and partners, thus helping mitigate the potential negative effect of depending on a few large markets and a relatively narrow base of manufacturing goods. Two areas of potential promise are services exports and exports of green (or greener) products. Chapter 2 of this issue of Taking Stock discusses potentials and options for Vietnam’s green products.

**In addition to the uncertainty associated with the path of the pandemic, the authorities should take action to minimize the effects of the fiscal, social, and financial sector risks.**

**Step up fiscal support.** Unlike most countries, Vietnam has substantial fiscal space but has not used it sufficiently to support the economy in 2021. Concern for debt sustainability is an important pillar of fiscal policy and a credit to the government of Vietnam. In fact, one could argue that bearing the burden of the crisis now without further expenditure does not burden future generations with debt accumulated to deal with the crisis. However, not stepping up fiscal support in times of deep crisis causes serious economic hardship for many households and informal workers, and is damaging to the economy, potentially reversing some of the poverty reduction gains Vietnam has achieved in the past two decades. In the short run it deprives the economy of much-needed expenditures to support growth. It is also partly due to budget rigidities that did not allow moving funds across budget units without approval by the NA standing committee and People’s council.<sup>38</sup> Perhaps in the time of emergency, this authority should be delegated to the government instead to make it more responsive to crisis.

**As Vietnam aspires to become a high-income economy in the next two decades, it should take note that all developed economies use countercyclical fiscal policies as a major tool to modulate growth.** In times of crisis, these governments accept a sharp fall of tax revenues to allow businesses to weather the crisis. They also spend to support their economy, and by extension accept a larger deficit. In the case of Vietnam, as expenditures have been slow to materialize in 2021 for a variety of reasons, the government could consider revenue instruments such as a year-long VAT tax break to support private demand. In the long run, low public investment rates, especially in infrastructure and human capital, will affect the growth potential of the country as it prepares to implement the 2021–2030 Social Economic Development Strategy (SEDS) and transition to a more sustainable growth path.

**Also, in the medium term to long term, as fiscal authorities proceed with medium-term consolidation efforts, it is important to ensure that it does not affect growth potential.** The authorities should consider reforms in revenue and expenditure policies and practices. Domestic revenues should be improved through

37 The health campaign launched by the Vietnamese authorities to keep people healthy and infection free in the wake of the COVID-19 pandemic. 5 K translates into “Masks, Disinfection, Distance, Distractions (do not congregate) and Medical Declaration”.

38 Article 52 and 53 of the State Budget law.

administrative and tax policy reforms and be used efficiently to finance the increased infrastructure and quality social services needs of the country in the coming decade. Improving expenditure efficiency in service delivery will further support the overall fiscal objectives of the authorities. Given the weaknesses of the public investment program made evident again by the low implementation rates in the first semester of 2021, it would behoove the authorities to review and improve planning, selection, and implementation of the investment program to strengthen its effectiveness for the citizens in the short to medium term and its impact on Vietnam's long-term growth potential.

**Address social effects of the pandemic.** The April outbreak has left an indelible impact on the labor market, compounding the lingering effects of the first year of the crisis. Labor participation and employment have been further affected by the Q3 lockdowns, and households have lost income. Informal workers and women have been especially penalized. The first group does not always have access to services to help alleviate their difficult economic circumstances. Women have been burdened with more caregiving responsibilities at home and may face more challenges rejoining the labor force and finding new jobs. Lower household income could affect consumption and investment decisions and, by extension, economic recovery. Policies such as increasing expenditures in health, education and digital transformation may help alleviate the short-term effects of the crisis. These expenditures could include provision of tablets or ensuring internet accessibility to ensure learning outcomes by virtual learning. Enhancing health checks and nutritional follow-ups would help ensure children avoid malnutrition and stunting, which continues to be an issue in Vietnam. The authorities should also review of the country's social protection programs to improve its targeting, scope, reach, and efficiency. In the medium term, developing an electronic database to eventually unify registry of potential beneficiaries and provision of services would be an important step to reform the system and ensure future victims of natural or economic shocks receive adequate support.

**Address the financial sector reform agenda.** There is potential for adverse impact of high NPLs on the financial sector and risk to bank assets, which in turn threatens the sustainable economic recovery. Currently, the forbearance measures can delay the identification and recognition of NPLs, and the impacts of the April COVID-19 outbreak have not been fully reflected yet. Therefore, NPLs and bank asset quality should be monitored closely. In fact, policymakers should consider four areas for actions.<sup>39</sup> First, any policy should minimize the extent of moral hazard and maintain adherence to sound credit risk management practices. Forbearance measures should be used to extend credit to viable businesses and households that are temporarily affected by the pandemic to sustain the economy and maintain financial stability, not to promote an environment where lower lending standards would be acceptable. Second, policymakers should adopt a gradual exit strategy, unwinding the relief measures as soon as circumstances permit to ensure sound financial and risk management and discipline. Third, policymakers should take action to ensure that banks are ready to implement effective and early workouts as part of NPL resolution. These actions include establishing or strengthening a framework for loan restructuring in general, legal recovery through collateral enforcement, write-offs, and sales or debt trading. An effective insolvency regime is important in minimizing losses in NPL resolution. Fourth, policymakers should strengthen prudential supervision to enable early identification of problem banks and strengthen the resolution framework to deal with them, including but not limited to, bank restructuring, asset separation, merger, acquisition, bail-in, and liquidation.

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39 For further elaboration, please see World Bank Group (2021).

## How can trade do more for sustainable growth in Vietnam?

**As the Vietnam's economy recovers from the COVID-19 pandemic and the authorities start to implement their new vision of a more sustainable development model through the SEDS, a critical question is how trade can be transformed to support this transition.** Why would the role of trade matter? Because trade has been a mainstay and major contributor to the structural transformation and development of the Vietnamese economy in the past two decades. It has helped the transition of Vietnam from an agricultural to a manufacturing and services-based economy. It has brought in FDI and helped create millions of low-skilled jobs that have then helped reduce poverty in the country. Vietnam has been such a success story in trading in that the value of its merchandise exports is larger than its GDP, and the value of its merchandise trade (exports + imports) is double its GDP.

**While the success in exporting goods has been a boon for the country in the past two decades, it has also brought challenges.** The explosion in exports has been paralleled by an explosion in imports, highlighting the low value added of Vietnam's exports. Low value added reflects low productivity, which in turn hampers Vietnam's transition to a high-income country by 2045, the government's objective for the country discussed in the new 2021–2030 SEDS. The linkages between exporters and domestic firms remain limited, both in backward and forward value chains. The diversification of exports is also relatively limited in terms of products (with electronics accounting for 60 percent of merchandise export), of firms (with Samsung representing a quarter of total merchandise exports), and destinations (as US, China, and Japan accounts for ¾ of the country's trade flows). The automation of manufacturing will erode Vietnam's main comparative advantage – its cheap labor force. Finally, the country still appears relatively closed to trade in services.

**Another development has emerged as key determinant of Vietnam's trade sector – its relationship with the environment and the management of climate change risks.** Indeed, the two-decade-long export-driven growth model has affected Vietnam's environment and is increasingly being challenged as the government has endorsed a shift to a new growth model that is more efficient, greener, and more sustainable. Today, the export sector has an important carbon footprint in the Vietnamese economy due to its reliance on high energy intensive technologies and the use of transportation, which is itself a main contributor to greenhouse gas emissions.

**At the same time, global and domestic commitments to reduce greenhouse gas emissions will affect the Vietnamese trade sector.** Global climate change and international efforts to mitigate its effects and/or adapt to them are expected to affect both the supply of and demand for Vietnamese exports. On the supply side, major sectors in Vietnam's economy, such as manufacturing, agriculture, and transport, have and are expected to be affected by global climate change (such as flooding and tropical storms), changing the composition and value of Vietnamese exports. On the demand side, Vietnamese exports will likely be subject to new demands by major trading partners and consumers who are increasingly asking for more environmentally conscious production processes and greener goods and services. These global changes and challenges can also be new opportunities for development of new – and greener – products. Chapter 2 of this issue of Taking Stock report elaborates on how Vietnam's can harness the impacts of climate change on its trade sector, addressing challenges and taking advantage of new opportunities in line with the new development vision laid out in the 2021–2030 SEDS.





*Photo credit: Nguyen Quang Ngoc Tonkin@shutterstock.com*



## **CHAPTER 2**

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### **NO TIME TO WASTE**

**The challenges and opportunities of cleaner trade for Vietnam**

**The 26th United Nations Climate Change Conference (COP26) was held in early November 2021 in Glasgow, Scotland, at which Vietnam's prime minister, Phạm Minh Chính, pledged once again that Vietnam would be part of the global climate change solution.** The country aims to increase the share of clean energy in its total primary energy supply to at least 20 percent by 2030 and 30 percent by 2045 and has pledged to phase out coal-fueled power generation and made a commitment to reach net zero emissions by 2050. Other countries, including European Union countries and the United States, major trading partners of Vietnam, have made similar pledges.

**What does global climate change and these commitments mean for Vietnamese firms and exports?** How will trade be affected, or better yet, how can trade help? What are the challenges, the required foundations, and the opportunities, and what needs to be done?

**Trade is a central part of the solution to climate change; it comes with opportunities, but also with challenges, which the government can help to resolve.** Trade can enhance the ability of the economy to acquire new technology to reduce pollution and adapt to new environmental changes. For the firms, it is an opportunity to produce new environmentally friendly goods and services and find new markets for them. As the world transitions to low carbon, this can also shift export comparative advantages to areas with cleaner production techniques. This is again an opportunity for the authorities to support the transition of the economy to a more resilient, greener, and cleaner production and export base. Finally, imports are critical to immediate recovery from a natural disaster when essential items such as food and medicine are in short supply, as well as for longer-term reconstruction. Thus, in an increasingly climate change-afflicted world, trade can help support technological adaptation, spur new areas of comparative advantage and growth, enable recovery from natural disasters, and help with food insecurity.

**Vietnam has benefited enormously from adopting an export-oriented growth model in the past 20 years.** Starting with membership in the World Trade Organization (WTO) in 2007 and complementing that with 13 free-trade agreements/regional trade agreements in effect by end-2020, the country has succeeded in enhancing its competitiveness through increased access to markets and lower tariffs.<sup>40</sup> This policy has led to an exponential growth of its trade flows over the past two decades. Today, the value of goods and services exported by Vietnam is higher than its gross domestic product (GDP), with a high concentration in light manufacturing (electronics, textile) and to a lesser extent in agriculture (rice).

**However, Vietnam's export-driven growth approach is being increasingly challenged by rising environmental and climate changes.** On the one hand, the trade sector, with its substantial carbon footprint and resource intensity, contributes to increasing environmental damage and depletion of the country's natural wealth. On the other hand, climate change affects Vietnam's competitiveness and trade flows by raising production and transport costs.

**Also, Vietnam is an active player in global value chains and is a member of several free trade agreements (FTAs) that bind it to being environmentally more responsible.** Membership in FTAs, including the agreements contain some specific clauses on sustainability, energy efficiency, and climate commitments by Vietnam (for example, adherence to the Paris Agreement). As part of global value chains, Vietnam is also subject to the increasing pressure from global buyers to reduce its greenhouse gas emissions and environmental footprint.

<sup>40</sup> Center for WTO and International Trade, Vietnam Chamber of Commerce and Industry, Hanoi. Two more FTAs, the RCEP and UKTVTFA, were signed in late 2020 but are not in effect yet. Another two FTAs with EFTA and with Israel, are under negotiations. <https://wtocenter.vn/thong-ke/13814-vietnams-ftas-summary-as-of-april-2019>

**This section looks at the relationship between Vietnam's trade flows and global climate change and answers the following questions, highlighting challenges and opportunities:**

- How vulnerable is Vietnam's exports sector to climate change?
- How much does the trade sector contribute to carbon emissions in Vietnam?
- How would plans by Vietnam and other countries to mitigate environmental damage affect the country's trade? Specifically, what would be the impact of climate policies like a new national carbon tax on emissions and trade flow composition? What would be the impact of green strategies like border carbon adjustments adopted by Vietnam's main trading partners on Vietnam's exports?
- Does Vietnam have a comparative advantage in producing green products, and what are the new opportunities for producing and exporting new environmental products?
- How can policies help promote the adoption of environmentally friendly technologies, production, and exports?

## I. How vulnerable is Vietnam's exports sector to climate change?

**Climate change is expected to affect two of Vietnam's most important export sectors—industry and agriculture.** The lion's share of industrial and agricultural production and exports are in coastal lowlands and deltas—geographic locations that are extremely vulnerable to the impact of climate change. Many export industrial zones are also in areas vulnerable to rising ocean waters (Mekong), flood (Ho Chi Minh City), and tropical storms (central coastal regions).<sup>41</sup>

**Agricultural production and exports are vulnerable to climate change, especially to rising temperatures, and extreme weather events.** Vietnam's agriculture sector accounts for 13.2 percent of exports and 10.3 percent of imports. Its low-lying coastal and river delta regions are at high risk from sea level rise. Climate change threatens agricultural production through high temperatures, saltwater intrusion, droughts, and floods. These can affect sowing or harvesting of key crops, reducing crop acreage and yield of major products such as rice, maize, cassava, sugarcane, coffee, and vegetables. For example, empirical studies show that rice production could suffer yield losses of between 5 and 23 percent by 2040, especially in the Mekong delta, increasing risks for food insecurity.<sup>42</sup> Export capacity and by extension farmers' income and the food security of the more vulnerable groups are expected to suffer.<sup>43</sup> The composition of production and agricultural landscape may need to change to adapt to the new temperatures, rain patterns, and availability of fresh water.

**This negative effect on Vietnam's main production and exports will be exacerbated by the damage to trade-related transport, which is vulnerable to extreme weather events.** Damage to transport and logistics infrastructure leads to delays and increased costs and directly affects exports and imports. More serious environmental changes, such as sea level rise, may submerge some transportation infrastructure in coastal lowlands such as seaports, roads, railways, and airports. If the sea level rises 100 centimeters (3.28 feet),

41 Ministry of Planning and Investment, 2020 as reported by <https://tractus-asia.com/blog/growing-pains-vietnams-industrial-real-estate-conundrum/>. According to the article, as of July 2021, Vietnam had 369 registered industrial zones of which only 284 are in operation with the rest in some stage of development. The Red River Delta houses 68 IZs, the North and South Central Coast houses another 68 IZs, while South East houses 117 IZs and Mekong River delta another 55 IZs.

42 Jiang et al. 2018; Li et al. 2017.

43 Brenton and Chemutai 2021.

about 4 percent of the national rail system, more than 9 percent of national highways, and about 12 percent of provincial roads are estimated to be affected. The damage would be especially great in the Mekong Delta, where 28 percent of transportation systems and 27 percent of provincial roads are at risk. Sea level rise threatens the foundations of ports and airports in lowland coastal areas. Saltwater intrusion reduces the life expectancy of traffic works, especially steel structures, through the erosion of metal and other materials. High tides cause flooding, which affect the traffic and urban life of people, especially in the Mekong Delta.<sup>44</sup>

## II. How much does the trade sector contribute to carbon emissions in Vietnam?

**The trade sector is a major source of carbon emissions in the economy and has a relatively large carbon footprint by international standards.** These emissions are partly driven by production of exported goods and partly related to the emission- and energy-intensive transport services.

**Vietnam's current comparative advantage in agricultural products is in emission- and energy-intensive sectors.** Agriculture is Vietnam's second largest source of emissions after manufacturing, contributing about 33% of total greenhouse gas emissions in 2010.<sup>45</sup> Vietnam is also one of the largest producers and the second largest exporter of rice in the world. But the current method of rice production is also a major source of greenhouse gas emissions. The methane emitted from rice production in Vietnam accounts for more than 50% of the country's agriculture emissions. Livestock production related activities account for 32% of the total emissions from the agriculture sector.<sup>46</sup>

**On the other hand, while Vietnam ranks relatively high in emission intensity in manufacturing, analysis shows that the firm level direct GHG emissions are relatively small (Figure 2.1).**<sup>47</sup> Rather the emissions are associated with indirect GHG emissions that come from the purchase of electricity, steam, heating, or cooling.<sup>48</sup> This means that there is little individual firms can do directly to reduce emissions, rather, it is measures to decarbonize power and heat generation that will have the greatest impact.<sup>49</sup> However, Vietnam compares well with the rest of Asia on carbon dioxide (CO<sub>2</sub>) intensity of its electricity production, including when compared to Singapore, China, and Malaysia (Annex 1).<sup>50</sup> This may be a reflection of the share of hydroelectrical power, as well as Vietnam's increasing shift to renewable sources of energy, particularly solar power.

44 Nguyen et al. 2019, 59

45 Monre, 2014.

46 Monre, 2014

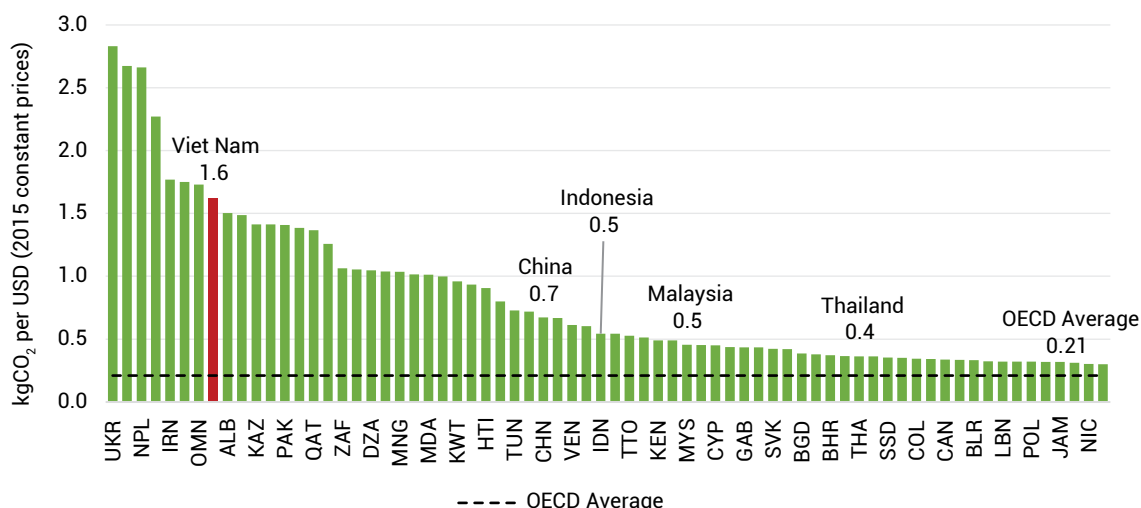
47 Direct GHG emissions, also called scope 1 emissions, occur from sources that are controlled or owned by an organization (for example, emissions associated with fuel combustion in boilers, furnaces, and vehicles).

48 Indirect emissions, also called scope 2 emissions, include purchase of electricity, steam, heating, or cooling.

49 Vietnam register a relatively high emission intensity in mineral products and textiles. This is the results of analysis with the prototype Emissions Intensity and Trade Exposure (EITE) country comparison tool uses 2014 Global Trade Analysis Project (GTAP) emissions and production data and 2019 World Integrated Trade Solution (WITS) Common format for Transient Data Exchange (COMTRADE) export data. Note that this tool does not currently include scope 3 emissions, which are emissions that are the result of the production of inputs purchased from other suppliers by the firm.

50 This is also called grid carbon intensity; in other words, it is the number of grams of carbon dioxide (CO<sub>2</sub>) that it takes to make one unit of electricity (a kilowatt) per hour (kW/hour).

Figure 2.1. Emission intensity in manufacturing, 2019



Source: World Bank staff calculations, 2021.

**Also, while the ratio of exported emissions to emissions from total manufacturing production has risen, this appears to be due more to large export values than to increased intensity of emissions in production of exports.** Emissions from production in Vietnam rose from 82 million tons to 173 million tons between 2005 and 2015, a much faster rate of growth than in other Association of Southeast Asian Nation (ASEAN) countries.<sup>51</sup> Table 2.1 shows that the share of total emissions embodied in gross exports in total emissions from production grew from 60.9 percent in 2005 to 75.8 percent in 2015.<sup>52</sup> This ratio was much higher in Vietnam than other ASEAN countries. If we look more closely,<sup>53</sup> table 2.1 also shows that the emission content of total exports (intensity of CO<sub>2</sub> emissions embodied in total gross exports) has fallen from 1.4 tons per US\$1,000 in 2005 to 0.9 tons per US\$1,000 in 2015. The efficiency of CO<sub>2</sub> emissions embodied in total production, however, has increased from 0.7 tons per US\$1,000 in 2005 to 1.1 tons per US\$1,000 in 2015. The same pattern can be seen in imports (not reported here). This is in line with the findings in the previous paragraph that the rapid development of manufacturing and the type of manufacturing have led to increased GHG emissions indirectly, as the sector uses electricity, steam, heat, or cooling to function.

51 Source: OECD Trade in embedded emissions database

52 Emissions embodied in exports are mainly due to the textiles and apparel, chemicals, and metals sectors. Emissions embodied in computers and accessories are just under one-third of those embodied in textiles and apparel.

53 We use the following formula to decompose the effects: [Export emissions/total production emissions] = [export/production] \* [export emission/exports]\*[production/total emission].

**Table 2.1. Comparison of production and export CO<sub>2</sub> emissions, 2005–2015**  
*million tons and percent*

Country/Region	2005 gross exports				2015 gross exports			
	Share of total emissions embodied in gross exports in total emissions from production (%)	Gross exports to GDP (%)	Intensity of CO <sub>2</sub> emissions embodied in total gross exports (tons per US\$1,000)	Efficiency of CO <sub>2</sub> emissions embodied in total production (US\$ thousands per ton)	Share of total emissions embodied in gross exports in total emissions from production (%)	Gross exports to GDP (%)	Intensity of CO <sub>2</sub> emissions embodied in total gross exports (tons per US\$1,000)	Efficiency of CO <sub>2</sub> emissions embodied in total production (US\$ thousands per ton)
Asia-Pacific Economic Cooperation	9.1	6.1	1.0	1.5	9.6	7.0	0.6	2.1
Association of Southeast Asian Nations	48.3	52.9	1.0	1.0	43.8	41.5	0.6	1.7
China (People's Republic of)	30.4	30.5	2.4	0.4	23.6	19.9	1.0	1.2
European Union (28 countries)	15.9	11.8	0.4	3.5	20.9	16.8	0.3	4.8
Indonesia	35.0	35.0	1.2	0.8	23.3	20.8	0.6	1.8
India	21.2	19.2	1.5	0.8	21.1	19.3	1.1	1.0
Philippines	29.0	27.1	0.8	1.4	27.4	26.8	0.4	2.8
Thailand	60.7	64.7	1.1	0.9	64.9	64.9	0.7	1.5
<b>Vietnam</b>	<b>60.9</b>	<b>62.6</b>	<b>1.4</b>	<b>0.7</b>	<b>75.8</b>	<b>78.4</b>	<b>0.9</b>	<b>1.1</b>
East and Southeast Asia	21.4	15.6	1.2	1.1	18.5	15.2	0.8	1.6

Sources: All data are from the Organization for Economic Co-operation and Development (OECD), except data for GDP are from the World Bank.

Note: Efficiency of CO<sub>2</sub> emissions embodied in total production is the ratio of total emissions from production to GDP.

**Finally, Vietnam's current comparative advantages in transport services in emission- and energy-intensive sectors.** The rapid development in infrastructure in Vietnam has led to a significant increase in internal mobility and transport services—the total cost of transporting national passengers-kilometer increased from US\$32 billion in 2000 to US\$169 billion in 2016, or by about 520 percent, and, during the same period, the total cost of national freight ton-kilometer increased from 32 billion to 111 billion, or by about 340 percent. While such exponential growth in mobility was a contributor to the impressive economic growth and poverty reduction in Vietnam, it has also had negative environmental impacts, such as air pollution.<sup>54</sup> In fact, a 2016 study finds that 88 percent of manufactured goods are transported by road and the transport sector (including freight and passenger) accounts for 25 percent of total emissions of Vietnam.<sup>55</sup>

54 Oh et al. 2019.

55 Binh, N.T. and Tuan, V. A. 2016.

### III. How would plans by Vietnam and other countries to mitigate environmental damage affect the country's trade?

**Vietnam can reduce its level of carbon emission without affecting the country's competitiveness.** This can be done by using higher prices (tariffs and taxes) or regulations on goods and services that cause the most pollution. An analysis using an economic model finds that a carbon tax in Vietnam leads to a significant reduction in emissions, without penalizing the country's competitiveness. Most export sectors will not be significantly affected as they are not direct emitters, except for coal (which is only marginally exported<sup>56</sup>). The textile sector will be impacted negatively because of its relatively high emission intensity, but this decline will be compensated by the gradual increase in green exports boosted by higher labor and capital productivity over time.

**Vietnam's export competitiveness, however, could be affected by the mitigation policies of its major trading partners.** Consumers in Vietnam's major export markets – such as the US or the EU - are increasingly demanding more environmentally friendly goods and cleaner production processes. Also, many FDI firms are part of value chains where the central corporations have committed to greener practices as part of their corporate social and environmental commitments. Such commitments will trickle back to producers along the value chains. For examples, Apple corporation is transitioning its entire supply chain to 100 percent clean energy.<sup>57</sup> FoxConn, one of Apple's major suppliers, which has recently moved its assembly lines to Vietnam, will be subject to Apple's environmental-social-governance (ESG) and decarbonization requirements.

**In fact, industrial parks (IPs) that house a large share of the FDI in Vietnam would most like need to transition to cleaner production processes or risk losing investment to competitor countries who have made this transition.** IPs account for a large share of the manufacturing sector and about a quarter of total emissions. Vietnam currently has 372 industrial zones including 17 coastal economic zones (Rentschler et al.2020).<sup>58</sup> They generate approximately 30 percent of the total industrial output and a large part of the country's exports.<sup>59</sup> IPs also account for about 25 percent of total annual CO<sub>2</sub> emissions.<sup>60</sup> The role of IPs in total emissions is likely to increase, in line with the experience of its regional peers. In China, for instance, IPs are responsible for between 33 percent to 50 percent of total emissions.<sup>61</sup> Given the shift in consumer sentiments in destination markets and new GVC environmental commitments, inaction by Vietnamese authorities could translate into GVCs moving their production elsewhere.

56 Higher energy process resulting from carbon taxation can be counterbalanced through technological innovation in energy production to reduce emission and/or move to cleaner energy sources, Improved efficiency in energy use.

57 Apple, Inc. Climate Change 2020. [https://www.apple.com/environment/pdf/Apple\\_CDP-Climate-Change-Questionnaire\\_2020.pdf](https://www.apple.com/environment/pdf/Apple_CDP-Climate-Change-Questionnaire_2020.pdf).

58 Rentschler, Jun; de Vries Robbé, Sophie; Braese, Johannes; Nguyen, Dzung Huy; van Ledden, Mathijs; Pozueta Mayo, Beatriz. 2020.

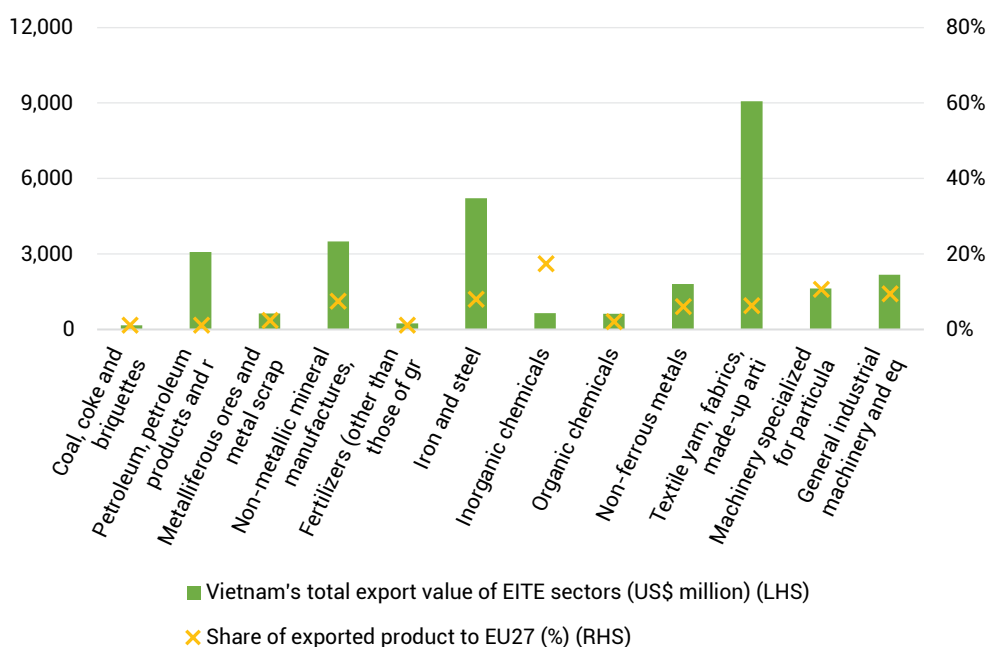
59 World Bank 2020. In Turkey, industrial zones contribute to one-third of total exports; and in Latin America and the Caribbean, industrial zones contribute more than 50 per cent of total exports in Costa Rica, the Dominican Republic and Nicaragua.

60 Industrial parks' contribution to emissions was estimated based on the comparison between industry output and industrial parks' output per GDP. Data available from OurWorldinData was used (<https://ourworldindata.org/co2/country/vietnam>, GHG emissions by sector). This data includes GHG emissions by manufacturing and construction sectors, as well as light industry. As of 2016, the estimated GHG emissions of the manufacturing and industry sectors together were roughly 96.5 million tons of CO<sub>2</sub>. Considering the share of industrial parks for industrial output (89 percent, the estimated industrial parks' total emissions were roughly 85.9 million tons of CO<sub>2</sub>e or 25 percent of total gross emissions (268.9 million tons of CO<sub>2</sub>e). Considering the impacts of land-use change and forestry that offset GHG emissions, industrial parks account for roughly 27 percent of the net total emissions (319 million tons of CO<sub>2</sub>e).

61 <https://projects.worldbank.org/en/projects-operations/project-detail/P158079>

Also, many countries are contemplating setting higher tariffs on polluting goods and services to reduce emissions by raising the price of carbon. Such decarbonization policies can impact global markets and cause shifts in technology, fuel availability, and trade dynamics from changing consumer preferences or tariffs on emission-intensive goods. Two key determinants of the level of potential exposure to transition risks are the level of exposure to international markets, and the emission intensity of its trade-exposed sectors (relative to the emission intensity in other countries). For example, the European Union (EU) is one of Vietnam’s main export destinations. An analysis of Vietnam’s relative emission intensity and trade exposure of key products to the EU finds that Vietnam’s exposure is in inorganic chemicals and machinery, given the high export share of these products (figure 2.2).<sup>62</sup>

Figure 2.2. Emission-intensive (and non-emission intensive) products



Source: Prototype Emissions Intensity and Trade Exposure (EITE) Country Comparison Tool.

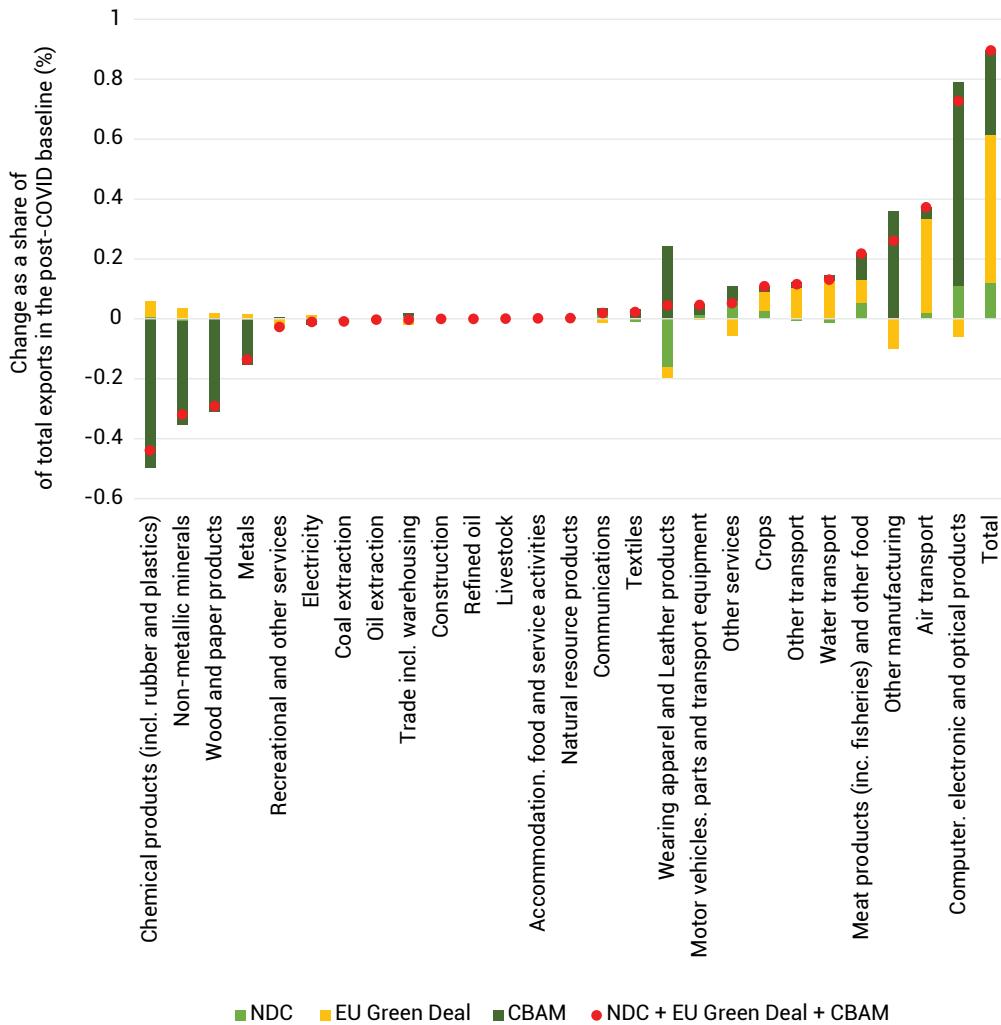
An analysis of the 2019 EU Green Deal, which includes a plan to implement a border carbon tax adjustment, finds that it would have limited impact on Vietnam (box 2.1). The main explanation for this limited impact is that the share of the EITE sectors in exports to the EU was only about 4 percent in 2019, with the highest sector being iron and steel (3.8 percent) (figure 2.2). Only the exports of chemicals, cement, wood and paper, and metals would decline, but they already represent only a small share of Vietnam’s total exports. The exports of some sectors, however—namely, non-carbon-intensive products such as other manufacturing, computers and electronics, and some transport sectors—to the EU increase, representing new opportunities to integrate more deeply into global value chains. By 2030, the value of exports would even increase marginally due to trade diversion. It is also noteworthy that as the EU CBAM coverage expands and as other countries implement their own CBAM schemes, their macro impacts will become more significant.

The low impact of the EU Green Deal applies to the entire East Asia and Pacific (EAP) region. The most penalized regions by the EU Green Deal CBAM will be Eastern and Central Europe and South Asia. The

62 The analysis used the Prototype Emissions Intensity and Trade Exposure (EITE) Country Comparison Tool.

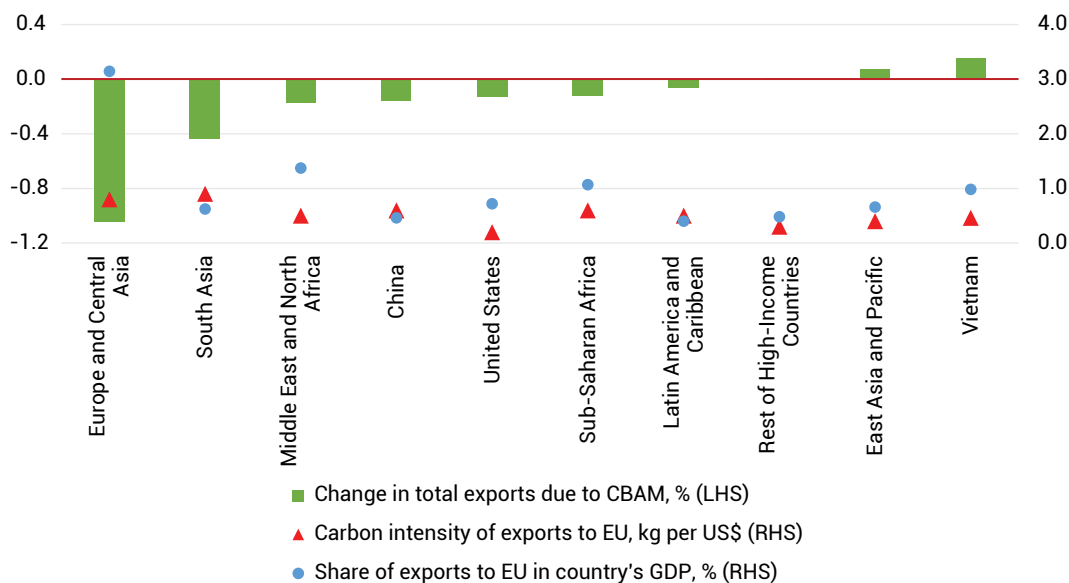
magnitude of the impact is related to the share of EITI goods exported by each country to the EU and their carbon intensity. Vietnam and its EAP neighbors have relatively lower carbon intensity of exports to the EU than Eastern and Central Europe and South Asia and are expected to see their exports increase marginally because of the CBAM (figure 2.4).

**Figure 2.3. Impacts of the EU Green Deal and Border Carbon Adjustment Mechanism by sector in Vietnam exports to the EU**  
*difference relative to the Covid L-shape recovery baseline in 2030, in percent*



Source: ENVISAGE simulations.

**Figure 2.4. Impacts of the CBAM on total exports by EU partners and carbon intensity of exports to the EU**  
 % change in 2030 relative to the EU Green Deal implementation scenario



Source: ENVISAGE simulations

**Box 2.1. The EU Green Deal and its impact on Vietnam**

**The EU Green Deal, signed in December 2019, includes a plan to implement a border carbon tax adjustment that could affect its trading partners, including Vietnam.** The EU Green Deal plans to cut emissions by 55 percent in 2030 relative to 1990 levels by a gradual increase in carbon tax rates within the EU. Concurrently, there are plans to implement a Carbon Border Adjustment Mechanism (CBAM) to bring the level of emissions per unit of imported output to the average sectoral level in the EU.\* The CBAM would only be applied to commodities that correspond to the EU’s Emissions Trading Scheme (ETS) sectors or the EITE sectors, which correspond to a small share of total exports for Vietnam (see figure 2.4). Despite small macro impacts, select products could be impacted significantly by carbon taxes on their exports to the EU. Furthermore, as CBAMs coverage is expanded to other sectors and as more countries introduce them, their total impacts on Vietnam exports will become stronger.

**An analysis finds that the overall impact of the EU green deal, including with the CBAM scheme, will be limited on Vietnam trade flows.** In the assessment, we implement CBAM as an ad-valorem equivalent tax imposed on region- and commodity-specific carbon content of imports to the EU. The carbon price level used to determine the CBAM rate is estimated as the difference between the carbon price in the EU and the carbon price in the country/region of the imported commodity origin. The analysis was conducted using a multi-country computable general equilibrium (CGE) model (ENVISAGE) that emphasizes two channels: (i) the increasing carbon price in the EU reduces the demand for fossil fuels within the EU, and (ii) the exports to other countries. Unlike the EU carbon tax, which mainly impacts demand and prices for fossil fuels, the CBAM puts more pressure on energy-intensive goods, such as metals (aluminum, iron, and steel), chemical products (fertilizers), non-metallic minerals (cement, lime, etc.), and electricity.

Source: a. EC 2019.

Note: \*The CBAM would be equivalent to an ad valorem equivalent tax imposed on region- and commodity-specific carbon content of imports to the EU. The tax rate would be determined as the difference between the carbon price in the EU and the carbon price in the country/region of the imported commodity origin.

## IV. What are the opportunities for Vietnam in greening trade?

**Greening trade is a priority for several reasons.** First, it can help reduce the carbon or environmental footprint of trade industries. In turn, these reductions contribute to the implementation of a green, resilient, and inclusive development approach and help Vietnam reach its national mitigation objectives. Second, greening trade can spur existing industries to retool to green technology and remain competitive in the future low-carbon world. Third, it can offer new opportunities for trading in environmental goods and services. Finally, greening trade is expected to be a potential driver of new jobs as existing industries retool and businesses take advantage of opportunities in new environmental goods and services.

### Current opportunities for Vietnam to trade in environmental goods

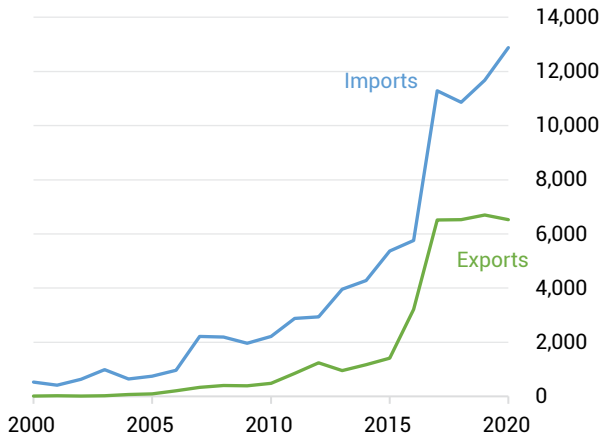
**To assess Vietnam's opportunities in environmental goods and service, we use a list of environmental goods used by the Asia-Pacific Economic Cooperation (APEC) and the WTO.<sup>63</sup>** It consists of 54 products, each with a corresponding Harmonized System (HS) six-digit code, categorized in seven groups: (i) air pollution control, (ii) environmental monitoring, analysis and assessment equipment, (iii) environmentally preferable goods, (iv) management of solid and hazardous waste and recycling systems, (v) natural risk management, (vi) renewable energy plant, and (vii) wastewater management and portable water treatment. In the services sector, environmental services are identified as waste treatment and de-pollution services, corresponding to WTO database classification.

**Vietnam's total trade (exports + imports) in environmental goods shows significant growth over the past two decades but appears to have plateaued in recent years** (figure 2.5). Vietnam's exports of environmental goods as a share of total exports have increased sharply from 0.87 percent in 2015, reaching a peak in 2017 of 3 percent. After the peak, the export share dropped to 2.3 percent (figure 2.6). However, the decline in environmental goods exports should be interpreted with caution as the calculation is based on mirror exports, and not all countries have reported import data for 2020. In value terms, total environmental goods exports have increased from US\$18.1 million in 2002 to US\$6.5 billion in 2020. Vietnam imported US\$5.4 billion worth of environmental goods in 2015, increasing its purchase to US\$12.9 billion in 2020. Environmental goods account for 4.9 percent of total merchandise imports in Vietnam, with intermediate goods constituting 85 percent of total environmental imports in 2020. Intermediate goods and final goods had equal shares in 2020 environmental goods exports.

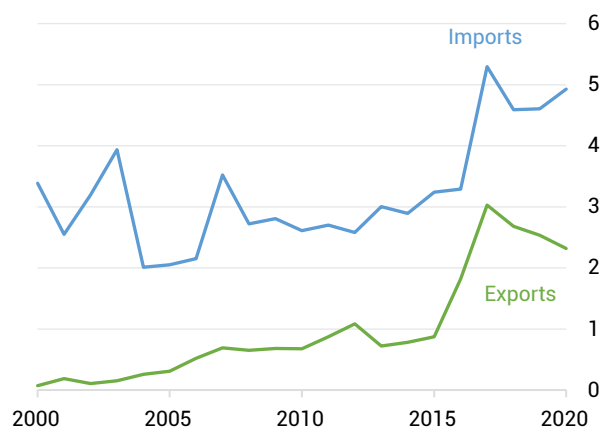
**In Southeast Asia, Vietnam has emerged as one of the top three countries trading in environmental goods.** In 2020, Vietnam was the third-largest exporter of environmental goods after Singapore (US\$21.6 billion) and Malaysia (US\$9.6 billion), and the second-largest importer, following Singapore (US\$15.6 billion). Between 2000 and 2020, Vietnam's annual average growth of environmental goods export was 48 percent, and of environmental goods import 22 percent, which is higher than other regional comparators except Cambodia.

<sup>63</sup> Environmental goods and services are generally captured by broad concepts and include all "products that are manufactured or services that are rendered for the main purposes of achieving environmental objectives." In addition, "environmentally preferable" means products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. In Vietnam, such definitions have been retained in the 2020 Environment Law, Articles 143 and 144, respectively, but the authorities are working on a new decree that should lead to a more precise definition and the creation of a new Vietnam Standard Industrial Classification (VSIC) code for manufacturing of environmental goods.

**Figure 2.5. Vietnam's trade in environmental goods**  
US\$ million



**Figure 2.6. Vietnam's share of environmental goods in total exports and imports**  
Percent

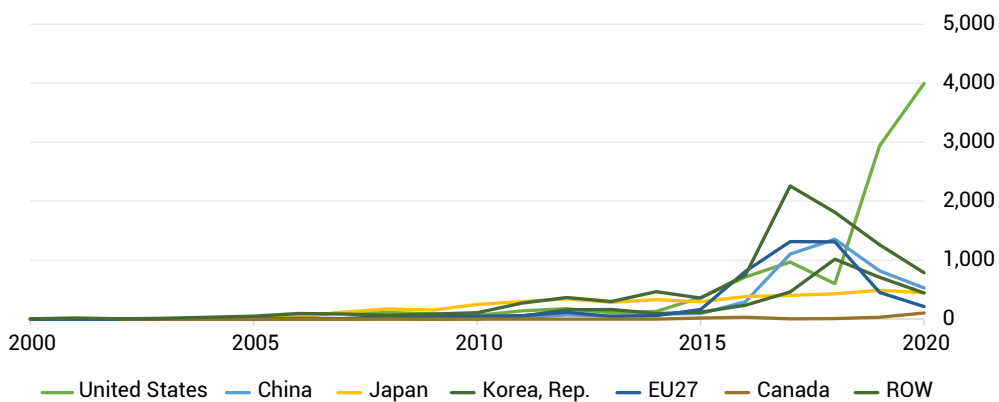


Source: World Integrated Trade Solution (WITS).

Note: Data are collected based on HS1996. HS441872 is replaced with HS441830 and HS441890.

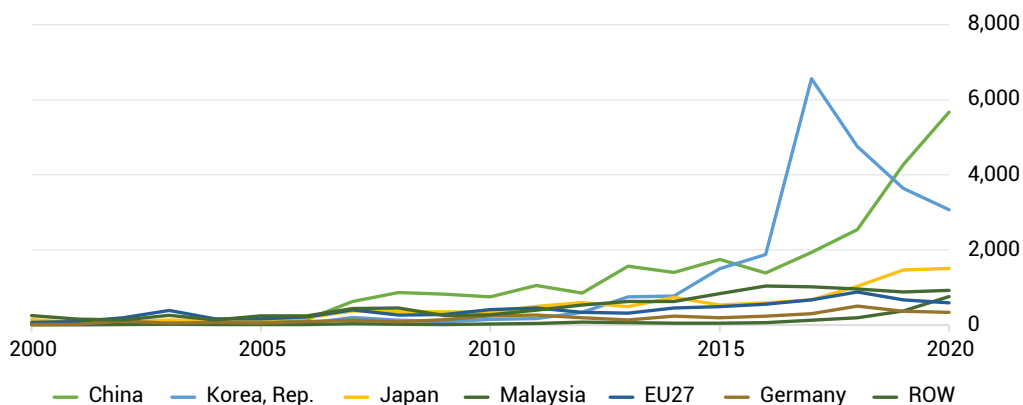
**Growth in Vietnam's environmental exports was driven by an increase in exports to the United States, while exports to China, the EU, and the rest of the world have declined sharply** (figure 2.7). The surge in Vietnam's environmental goods exports appears to be partly associated with trade diversion related to U.S.-China trade frictions, leading to new opportunities for Vietnamese exports to the U.S. market. Relatedly, exports to China have fallen sharply, but so have exports to most other export partners. On the import front, Vietnam now imports primarily from China, followed by the Republic of Korea and Japan. Total imports of environmental goods from China in 2020 were US\$5.7 billion in 2020, tripling from US\$1.9 billion in 2016.

**Figure 2.7. Vietnam's top destinations for environmental goods exports**  
US\$ million



Note: ROW=rest of the world.

**Figure 2.8. Vietnam's top sources for environmental goods imports**  
US\$ million

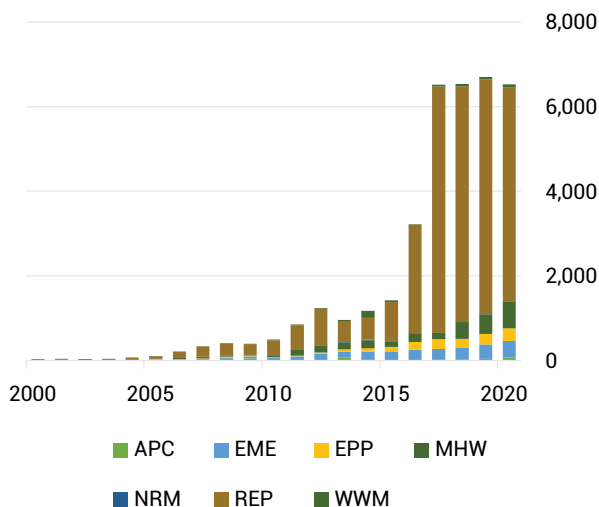


Note: ROW=rest of the world.

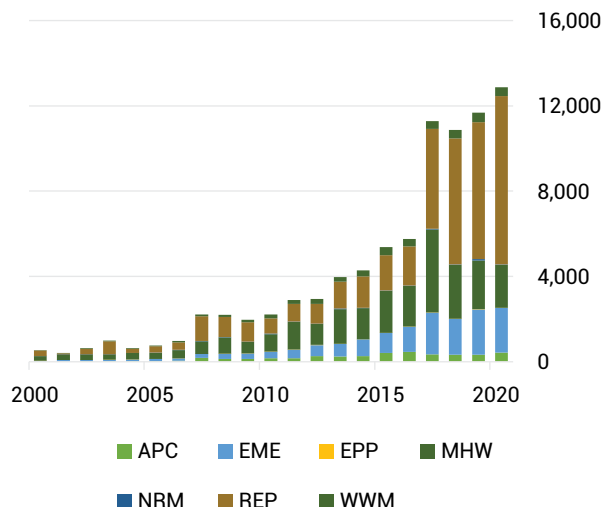
**Vietnam's trade in environmental products mainly has been driven by trade in renewable energy products among the seven categories.** Exports of renewable energy products increased from US\$3.5 million in 2002 to US\$5.1 billion in 2020, accounting for more than 50 percent of total environmental goods exports on average between 2002 and 2020 (figure 2.9). This sharp increase is associated with the strong demand for solar panels in the United States. According to the U.S. Energy Information Agency, demand for solar panels increased by 33 percent in 2020.<sup>64</sup> Possible explanations include increased interest in home improvement, expiring solar tax credits, continued growth in utility scale solar capacity, and falling costs of solar systems. To meet this surging demand, the United States imported large volumes of solar panels from abroad. Among renewable energy products, Vietnam imported a large volume of solar cells from China, while it exported solar modules and panels to the United States. This tells two stories. One is the growing U.S. demand for "Made in Vietnam" solar panels. The other is about a booming solar energy sector in Vietnam. The surge in imports tells a similar/mirror story. Vietnam purchased US\$7.9 billion worth of renewable energy products, which accounts for over 60 percent of Vietnam's total environmental goods imports in 2020 (figure 2.10). The second-largest category in Vietnam's imports is management of solid and hazardous waste.

64 US Energy Information Agency, "U.S. solar photovoltaic module shipments up 33% in 2020," September 1, 2021

**Figure 2.9. Exports of environmental products**  
US\$ million



**Figure 2.10. Imports of environmental products**  
US\$ million



Source: World Integrated Trade Solutions (WITS).

Note: APC = Air Pollution Control; EME = Environmental Monitoring, Analysis and Assessment Equipment; EPP = Environmentally Preferable Goods; MHW = Management of Solid and Hazardous Waste and Recycling Systems; NRM = Natural Risk Management; REP = Renewable Energy Plant; WWM = Wastewater Management and Potable Water Treatment.

**Growing U.S. demand for Vietnamese solar panels can be explained in the context of the U.S.-China trade friction between 2017 and 2020.** While China is the top solar panel producer, it faces high antidumping duties and countervailing duties, safeguard duties, and Section 301 tariffs.<sup>65</sup> During this period, layers of tariffs on Chinese solar panels made its price less competitive in the U.S. market compared to Vietnamese solar panels, which are only subject to safeguard duty, as the U.S. most-favored-nation tariff on solar panels is zero. Additional costs stemming from tariffs might have helped Vietnamese products become more attractive to U.S. importers. U.S.-China tensions also played a role in the growth of Vietnam’s photovoltaic (PV) cell and semiconductor exports. In 2018, the U.S. solar group called for import tariffs on panels manufactured by Chinese companies in Southeast Asia. The United States Trade Representative’s (USTR’s) June 15, 2018, announcement<sup>66</sup> of a 25 percent tariff on Chinese goods, including PV semiconductor devices (HS 854140), led to a decline in imports from China and a sharp increase in imports from Vietnam.

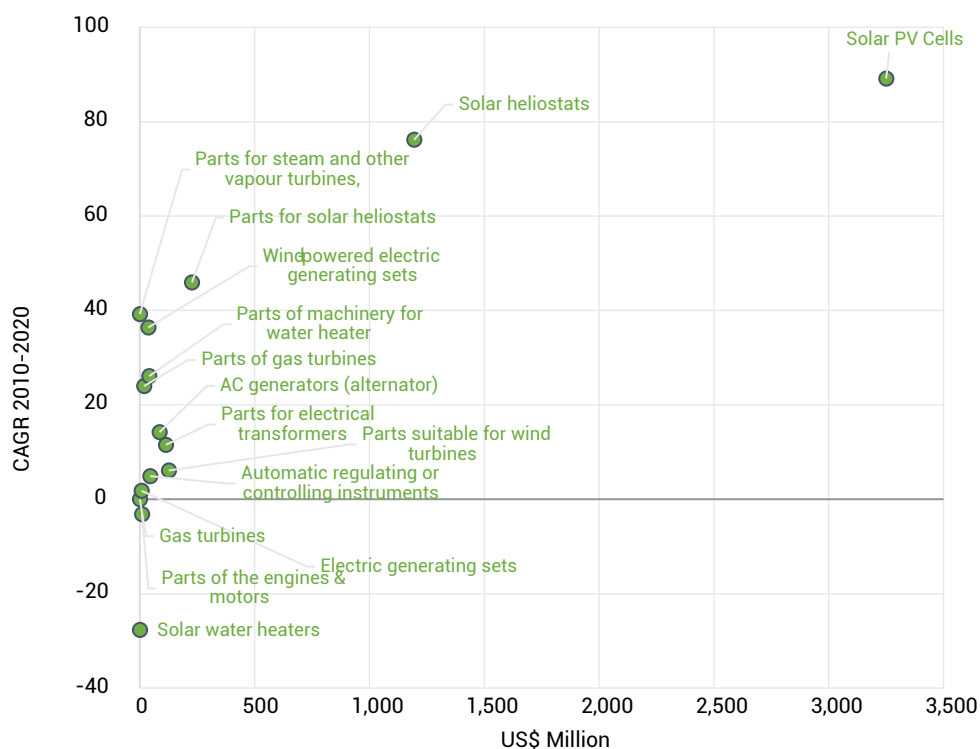
**Relatedly, solar cell and heliostat exports registered compound annual growth rates of 81.6 percent and 71.2 percent, respectively, from 2010 to 2020, starting from a low base** (figure 2.11). Wind-powered electric generating sets registered about 38 percent compound growth, while export of heliostat parts grew about 42 percent. These exceptional growth rates were achieved from a low initial base, so that export values have yet to truly capture the promising indicative change in the structure of Vietnam’s export basket. Such economic transformation and the emergence of new sectors are promising in that they will create new jobs in sectors that will continue to grow into the future as the world shifts to more climate-friendly trade, production, and consumption. The PV cell sector is a niche sector that is often embedded in complex

65 “Under Section 301, the United States currently imposes punitive tariffs of up to 25% on more than US\$300 billion worth of annual imports from China, and such Section 301 tariffs are in addition to regular import duties” (<https://www.jdsupra.com/legalnews/u-s-trade-representative-to-weigh-9728385/>).

66 <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/june/ustr-issues-tariffs-chinese-products>.

value chains. Therefore, access to inputs is critical to maintain a sustainable growth rate for the sector in the coming years.

**Figure 2.11. Environmental products exports—within the renewable energy category**  
Percent



Source: WITS exports (mirror imports).

Note: CAGR = compound annual growth rate.

### How easy is it to trade in environmental goods and services in Vietnam?

**While Vietnam imposes a low (0.33 percent) average tariff on environmental goods, but non-tariff measures (NTMs) may hamper trade flows.** Considering that Vietnam’s simple average applied tariff rate for all products was 12 percent in 2020, environmental goods face a zero-tariff in Vietnam. However, tariffs on environmentally preferable products (that is, products that are less damaging to the environment) are high (8 percent), so scope remains for tariff reduction in this area. Also, Vietnam imposed 199 NTMs on 54 environmental products in 2020. Renewable energy products faced the largest number of NTMs (62), followed by waste management (55) and monitoring equipment (48). For example, solar cells (HS854140) are required to meet labeling, inspection, and conformity assessments when they are imported to Vietnam (Annex 2). However, all imported products are subject to such requirements. Hence, environmental goods are hardly treated differently from other products.

### What are the foundations for producing and exporting more environmental products?

**Vietnam has adopted an export strategy to promote the development of more quality products and services, including environmental ones.** There has been a deliberate effort to build exporters’ capacity so they can conform to regional and international standards. As of 2019, Vietnam had 12,888 national

standards (Tiêu chuẩn Việt Nam, TCVNs) in effect, about 60 percent of which were harmonized with international, regional, or foreign standards (WTO 2021).<sup>67</sup> Manufacturers and importers are required to fulfil conformity assessments before selling their products freely in the market. As of 2020, more than 1,300 laboratories, including seven foreign laboratories, were accredited to provide conformity assessment services. Laboratories in ASEAN countries for electrical and electronic laboratories are recognized under the ASEAN Sectoral Mutual Recognition Arrangement for Electrical and Electronic Equipment Framework. Also, Vietnam accredited 72 certification bodies and 84 verification and inspection organizations. There are five product certification bodies under the Directorate for Standards, Metrology, and Quality (STAMEQ), the national standardization body. The Vietnam Certification Centre helps enterprises comply with certification for meeting national, foreign, regional, and international standards. And four Quality Assurance and Testing Centers (QUATEST 1, 2, 3, and 4) conduct testing of imports and exports for compliance with standards and technical regulations.

**Building local and export production capacity in environmental products has been further encouraged by a series of domestic reforms.** The taxation (albeit low) of fossil fuels such as petroleum products, coal, plastic bags, and various pesticide products is encouraging the shift toward renewable energy. An additional pricing instrument has been the feed-in tariff (FIT) system, which has been used to enhance private investment in solar and wind energy. In addition, Vietnam's new environmental protection law and regulations are an important step to promote sustainable green growth and development of renewable energy. Vietnam issued a mandate to design a domestic emission trading market and Measurement, Reporting and Verification (MRV) system. Under the new environmental protection law that enters into effect on January 1, 2022, businesses will be required to employ technology to control pollution. They are subject to recycling or monetary compensation obligations for certain products and packaging. Domestic or imported goods or packaging should be recyclable or have recyclable value, as instructed by regulators. These regulations are designed to support Vietnam's carbon emission reduction ambitions and to encourage renewable energy projects in Vietnam. Although they do not directly impact trade in environmental goods and services, they create strong incentives for business groups to trade and use environmental goods and services.

**Vietnam's adherence to a series of regional and bilateral trade agreements could also act as a catalyst:**

- **Under the Trade and Sustainable Development Chapter of the EU-Vietnam FTA**, which entered into force on August 1, 2020, the EU and Vietnam are committed to encouraging a high level of environmental protection while at the same time not lowering the level of environmental protection or derogating environmental laws to attract trade and investment. Particularly with respect to climate change, both parties recognize their commitments to the Paris Accord, the United Nations Framework Convention on Climate Change (UNFCCC), and the Kyoto Protocol to the United Nations Framework Convention on Climate Change. In line with the Paris Accord, the two parties agreed to improve their capacities in the transition to low greenhouse gas emissions and climate-resilient economies. In line with the UNFCCC, the EU and Vietnam agreed to share information and domestic practices in designing and operating a pricing carbon mechanism, promoting domestic and international carbon markets, and enhancing energy efficiency, low-emission technology, and renewable energy. The EVFTA also includes a dispute settlement mechanism tailored to this chapter.
- **The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) includes environmental commitments by all members in their trading practices.** Chapter 20 of the agreement states that Vietnam and member countries are committed to pursuing high levels of environmental

<sup>67</sup> WTO 2021.

protection, to enforce environmental laws effectively, not to derogate from the environmental laws to encourage trade or investment, and to promote transparency and public participation. Vietnam should take measures to control ozone depleting substances, aligning with members' obligations under existing multilateral agreements such as the Montreal Protocol. There are also provisions that recognize the importance of trade in environmental goods and services and that identify potential barriers to trade in environmental goods and services. Finally, the CPTPP includes a binding and enforceable dispute resolution process to address conflicting issues related to the environment chapter, which encourages member countries to enforce and comply with chapter 20.

## V. Does Vietnam have a comparative advantage in producing green products, and what are the new opportunities for producing and exporting new environmental products?

**Beyond these crosscutting reforms on standards, pricing, and international commitments, there are various opportunities for Vietnam to accelerate the development of trade in environmental products.**

The first opportunity arises from the country's revealed comparative advantage that has emerged in recent years, especially in renewable energy. Vietnam is already a main player in solar equipment but can position itself in wind-related technologies and electrical equipment (see box 2.2 for an example). One major step for Vietnam to consolidate its export capacity and leadership in this area is to diversify its export markets. This would protect it from being unduly affected by policies enacted by trading partners (importers) that might affect this trade. Opportunities lie in growing markets such as the African Continental Free Trade Area.

**Also, as discussed, FTAs can provide new opportunities for green trade.** For instance, the EU Green Deal CBAM creates opportunities in low carbon intensive products such as computer, electronic and optical equipment, which can further be explored. In fact, when CBAM is implemented, production of computer, and electronics are projected to increase by 0.6 percent relative to the EU Green Deal, the equivalent of 0.8 billion dollars.

**Box 2.2. Offshore wind supply chain development could lead to exports**

A large Vietnamese offshore wind market would enable local supply chain investment and optimization, leading to export opportunities in the regional and global markets. A large Vietnamese supply chain would also facilitate the use of local inputs for the projects, thereby reducing reliance on imports and boosting economic development. Vietnam possesses the strong port infrastructure and industrial skills needed for certain offshore wind supply chain component manufacturing. The development of this supply chain has the potential to deliver substantial economic benefits to the country via sustaining existing jobs, delivering new employment, and leading to additional high-value economic activity in Vietnam.

However, there remain several regulatory and sector-level barriers that threaten the development of a larger local supply chain. Barriers to inward investment in offshore wind development and growth include a lack of clarity on regulations, limited access to the grid, and issues around the bankability of projects. The government needs to implement a comprehensive framework around leasing and permitting processes, offer stable routes to market, and commit to ambitious volume targets for onshore and offshore wind. A supply chain plan is needed that considers involvement of Vietnamese businesses, drives innovation, reduces energy costs, and supports skills development. Skills development can be done through skills assessment for the sector, which can help enable the Vietnamese government to put in place a training program for the Vietnamese workforce, with the help of international developers and suppliers. The demand for Vietnam's manufacturing could decrease or shift to other countries in future if Vietnam does not move to producing more environmental or more environmentally friendly exports. In turn, this could affect the number and quality of jobs in manufacturing.

Source: World Bank Group Vietnam Offshore Wind Development Roadmap, prepared by BVG Associates.

**Furthermore, greening traditional exports should also be considered.** Vietnam should seize opportunities associated with FTA and global value-chains memberships to promote sustainable production across all its export products. The increased demand for environmentally friendly products in destination markets and ESG commitments by major corporation in more advanced countries should act as an additional incentive for Vietnam can take advantage of these opportunities to further improve its environmental standards across the board. This will help its exports have an early edge on marketing and establishing their products as environmentally friendly in major developed market. Some of the traditional exports where this greening is possible are:

- **The textile/apparel/footwear sector.** The sector will have an opportunity to improve its carbon and environmental footprint soon. For example, H&M, a global garment manufacturer which has 31 suppliers in Vietnam<sup>68</sup>, pledged to develop carbon-neutral supply chain for its manufacturing and processing factories owned or subcontracted by its suppliers, as well as these suppliers' own suppliers (e.g., fabric mills, fiber processors, spinners, or tanneries) by 2030. Nike has announced similar plans that will affect more than 100 Nike's suppliers in Vietnam. The sector is already working toward substantive energy savings. For instance, the International Finance Corporation (IFC) Mekong Climate Smart Manufacturing Advisory project has helped textile footwear industries to manage energy in an integrated manner. This means that they address energy demand by improving efficiency and energy supply by using distributed renewable energy (RE) generation (for example, rooftop solar). By providing hands-on advice for new technology and investment, industries and suppliers achieved up to 25 percent resource savings on their energy consumption and 48 percent resource savings on their water consumption, while adding profits through productivity and product quality improvement.

68 H&M also has set a goal to reduce scope 3 GHG emissions from purchased raw materials, fabric production and garments by 59 percent per product before 2030 (baseline 2017). H&M Group's Supplier List. <https://hmgroupp.com/sustainability/leading-the-change/transparency/supply-chain/>. It also has set a goal to reduce scope 3 GHG emissions from purchased raw materials, fabric production and garments by 59 percent per product before 2030 (baseline 2017).

- **Food processing/agribusiness.** The food and beverage sector’s production value is estimated at US\$33.6 billion and contributes toward 8 percent of the country’s annual average GDP. However, the food and beverage sector’s energy intensity is 173.59 ton of oil equivalent per billion U.S. dollars—the highest among ASEAN countries. Energy is a key cost driver for industrial production, accounting for 30 percent of total costs. With an annual export value of US\$9 billion (2018), aquaculture processing is an important export earner in Vietnam. This subsector has high energy consumption and GHG emissions. It can also potentially achieve energy savings of 30 to 40 percent by enhancing the use of materials and energy and recycling and re-using products or waste. Livestock and pig farms also have a high potential for decarbonization opportunities by generating either power or heat energy from biogas.
- **Cement, construction materials, and chemicals** are energy-intensive sectors but can contribute toward saving 30 percent of used power from the grid. This can be done through the application of fuel switching, including using industrial waste, hazardous waste, or both as fuel for clinker kilns and to create waste heat for power generation. However, to date, only a few cement companies have applied waste heat to power generation systems, despite the existence of regulations since 2015 requiring its use.

## VI. Policy recommendations

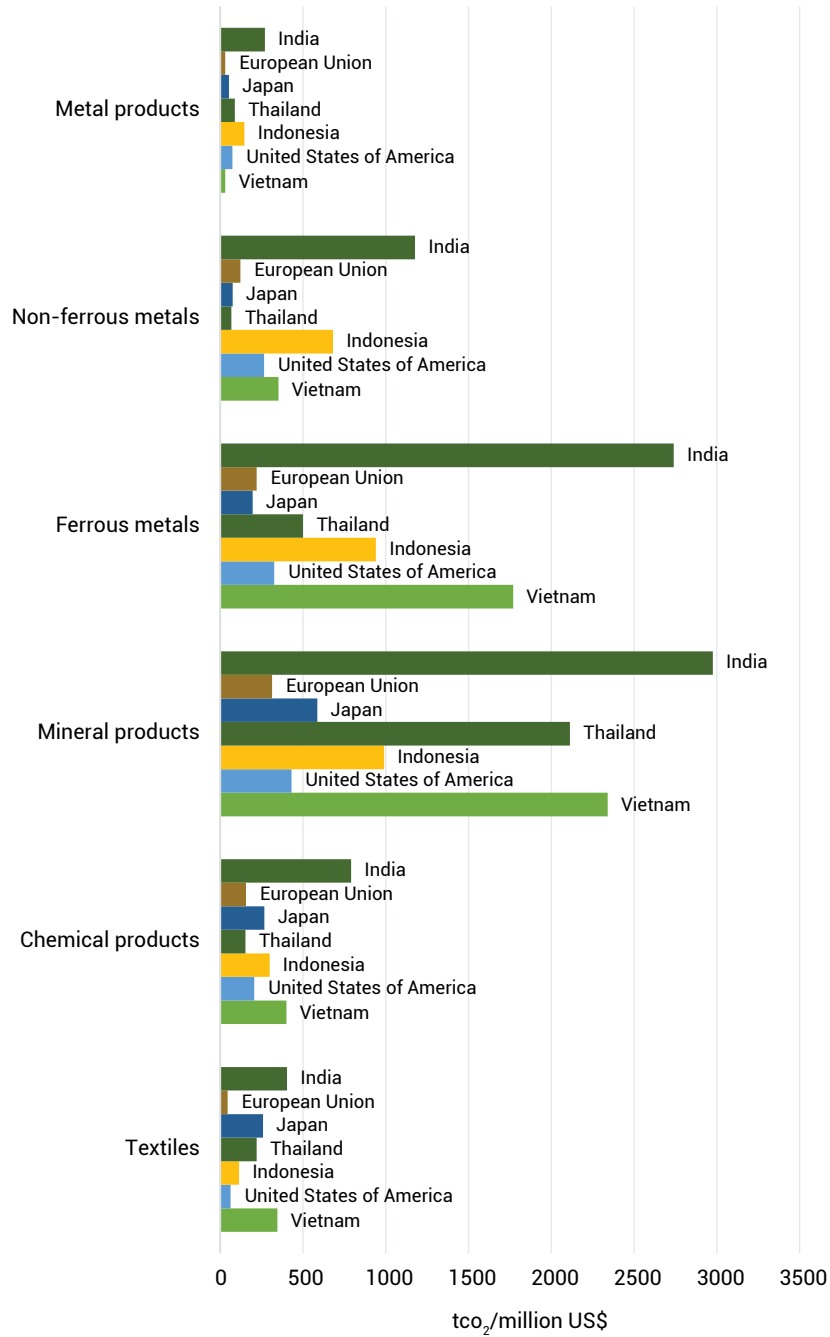
**Vietnam should adopt both mitigation measures and adaptation measures.** This is because Vietnam is a growing carbon emitter but is also expected to see impacts of climate change on productivity and output in its top tradable sectors - manufacturing, agriculture, and transport services. Because of the geographic concentration of economic activity in the lower coastal regions, investment in climate-resilient infrastructure is a cost-effective option.

### What could some of these policies be?

- **Trade policy can help facilitate mitigation and adaptation.** For example, reducing tariffs on technological goods and liberalizing regulatory policies can facilitate access to agricultural digital technologies and services from advanced economies, and foster innovations to increase yields while reducing the potential for adverse land-use change.
- **The policy regulatory framework in Vietnam includes extensive NTMs that may constrain the trade of goods, including environmental goods:**
  - Because these NTMs are applied on all products, systematically monitor them with a view to streamlining and reducing compliance costs. This would help boost trade flows and encourage entry of more firms into the sector.
  - Absence of appropriate measures to regulate the products, such as technical standards, can raise barriers to trade in environmental goods:
    - ✓ Review the regulation on these goods and services and compare with best practices in the region and globally.

- ✓ Explore opportunities to harmonize standards or pursue regulatory equivalence for environmental goods within existing trade agreements such as ASEAN and mutual recognition of testing and conformity assessment for such products where feasible.
- ✓ On environmental services: pursue with other countries mutual recognition of qualifications of environmental engineers, to streamline visa and work permit procedures for environmental specialists.
- **Policies to promote trade in environmental goods and services should be complemented by national activities to build local production capacity, increase domestic value added in environmental goods, and integrate with regional production networks and value chains.** During Covid-19 and due to U.S.-China trade friction, Vietnam has emerged as one of the top candidates for new relocation of production, away from China. This has attracted investment from China, other Asian countries, and the US.
- **Vietnam should seize opportunities associated with FTA and global value-chains memberships to promote sustainable green growth across all its export products.** Agreements such as the EU-Vietnam FTA and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) include environmental commitments by all members in their trading practice for all their exports. For instance, as a member of the CPTPP, Vietnam has committed to take measures to control the trade of certain substances that can significantly affect the ozone layer. Under Chapter 13 on Trade and Sustainable Development of the EU-Vietnam Free Trade Agreement (EVFTA, in force since August 2020), Vietnam agreed with the EU to consult on their mutual interests such as promotion of energy efficiency, low-emission technology, and renewable energy.
- **Vietnam should seize FTA opportunities to promote environmental products and services and development of renewable energy.** Vietnam's trade in environmental products has demonstrated its competitiveness in North America and East Asia, particularly in renewable energy products. Such adherence would enhance the opportunities for inward FDI into Vietnam and/or transfer of new technologies to Vietnamese firms, and further integration into the global and regional value chains.

# ANNEX 1. EMISSION INTENSITY OF KEY PRODUCTS IN VIETNAM



## ANNEX 2. ALL NON-TARIFF MEASURES THAT FACE AN IMPORTER OF SOLAR PANELS (HS854140) IN VIETNAM

Category	Subcategory	Vietnam's non-tariff measure description
Technical Barriers to Trade (TBT)	B31 Labeling requirements	Requires energy labelling for means and equipment using energy under management of the Ministry of Industry and Trade (MOIT). Decree No 21/2011/ND-CP requires producers and importers to affix equipment and vehicles with energy labels pursuant to the Law on Energy Conservation.
Technical Barriers to Trade (TBT)	B83 Certification requirements	Requires imported information and technology (IT) and communication products to be certified in accordance with Vietnamese standards.
Technical Barriers to Trade (TBT)	B83 Certification requirements	Requires that imported products have a Certificate of Free Sale as a precondition for other competent authorities in Vietnam to grant other certificates.
Technical Barriers to Trade (TBT)	B84 Inspection requirements	Requires that quality inspection of helmets, children's toys, steel for concrete reinforcement, and electronic devices be implemented by the registered or accredited certification organization or inspection organization.
Technical Barriers to Trade (TBT)	B84 Inspection requirements	Requires declaration of technical-regulation conformity of imported products. This means the importer must comply with state inspection in terms of quality of imports.
Technical Barriers to Trade (TBT)	B84 Inspection requirements	Sets out requirements for technical safety inspection for electrical equipment and tools.
Technical Barriers to Trade (TBT)	B89 Conformity assessment related to TBT not elsewhere specified	Sets out requirements for inspection and supervision of energy labeling.
Export-related measures (EXP)	P14 Export registration requirements	Requires exported IT and communication products to be certified in accordance with Vietnamese standards.
Contingent Trade Protective Measures (CTPM)	D22 Countervailing duty	Sets out general requirements for countervailing duties.
Price control measures including additional taxes and charges (PC)	F69 Additional charges not elsewhere specified	Requires importers to pay fees for granting certificate of announcement of, and inspection of food safety and hygiene.

Source: UNCTAD TRAINS.

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